Appendix

Weights and Measurements

This section has been written to give you instant access to a table of weights and measurements when you are entering your recipes. You should understand that the table of weights and measurements is only approximate. You can never be precise for many reasons:

- The moisture contents of products vary constantly.
- The sizes of individual pieces or particles will vary from container to container.
- The exact weight of a gallon or a pound of product is seldom a convenient, round number.
- It is impractical to say that a pint of water is 1 9/10 cups. It is simpler 2 cups.
- Products containing moisture become lighter as they dry out.
- Wet products containing sugar become heavier when the moisture evaporates and they become thicker.
- A cup of flour could weigh 4 ounces. If you sift it, it may weigh less.
- Any measurement such as a level teaspoon or level cupful is seldom exactly accurate.

The most accurate measurements are fluid ounce (FZ), weight ounce (WZ), count (CT), or portion of a recipe (PR). These are the measurements that we use in this book and in this section, adopted from the Software Creation. Accuracy is essential in food and beverage cost control.

Practical Weights

The following products are used so frequently in recipes that it is simpler to use the practical weights and measures rather than the actual figures. In the case of hydrogenated shortening and whipped butter, in which air is incorporated into the product, the exact weight should be used when using recipes for more than 25 servings. You make the decision according to your experience and record it in weight ounces (WZ), fluid ounces (FZ), or count (CT) (Figure A-1).

Figure A-1

Product	Pound	Cup	Ounce	Tablespoon
PRACTICAL MEASURE	2 cups	8 WZ	2 tbl	1/2 WZ
Salts	2 1/8 cups	9 3/4 WZ	1 5/8 tbl	2/3 WZ
Fats/lard/butter	2 cups	8 WZ	2 tbl	1/2 WZ
Sugar granulated	2 1/2 cups	7 1/2 WZ	2 1/8 tbl	1/2 WZ
Whipped butter	2 2/3 cups	6 WZ	2 2/3 tbl	1/3 WZ

Examples of Typical Weight Difference

Water weighs 8.14 pounds per gallon (WZ). Milk weighs 8.59 pounds per gallon (WZ). Light syrup weighs 10 pounds per gallon (WZ). Honey weighs 11.75 pounds per gallon (WZ). (1 gallon = 128 fluid ounces (FZ)) (Figure A-2).

Figure A-2

Group Characteristics	Example	Cup	Fluid Ounce	Tablespoon
Very dry, light, weight	Oregano, whole	1 WZ	16 TBSP	WZ = 0.063 (1/16)
Dry light leaves, ground	Thyme leaf	2 WZ	8 TBSP	WZ = 0.125 (1/8)
Moist product, ground	Curry powder	4 WZ	4.5 TBSP	WZ = 0.250 (1/4)
Wet products like meat	Peaches, sliced	9 WZ	2 TBSP	WZ = 0.500 (1/2)
Ordinary liquids	Water	8 WZ	2 TBSP	WZ = 0.500 (1/2)
Thick liquids	Molasses	11.2 WZ	1.3 TBSP	WZ = 0.750 (3/4)

The following charts are for reference purposes.

Water Conversion from Fluid to Weight

Cups	Pints	Quarts	Fluid Ounces	Pounds and Ounces	
0.5	0.25	0.125	4	0	4.00
1.0	0.5	0.250	8	0	8.25
1.5	0.75	0.375	12	0	12.50
2.0	1.00	0.500	16	1	0.50
2.5	1.25	0.625	20	1	4.75
3.0	1.50	0.750	24	1	9.00
3.5	1.75	0.875	28	1	13.00
4.0	2.00	1.000	32	2	1.25
4.5	2.25	1.125	36	2	5.25
5.0	2.50	1.250	40	2	9.50
5.5	2.75	1.375	44	2	13.75
6.0	3.00	1.500	48	3	1.75
6.5	3.25	1.625	52	3	6.00
7.0	3.50	1.750	56	3	10.25
7.5	3.75	1.875	60	3	14.25
8.0	4.00	2.000	64	4	2.50

Figure A-3 (*continued*)

Water Conversion from Fluid to Weight (*concluded*)

Cups	Pints	Quarts	Fluid Ounces	Pounds and Ounces	
8.5	4.25	2.125	68	4	6.50
9.0	4.50	2.250	72	4	10.75
9.5	4.75	2.375	76	4	15.00
10.0	5.00	2.500	80	5	3.25
10.5	5.25	2.625	84	5	7.25
11.0	5.50	2.750	88	5	11.50
11.5	5.75	2.875	92	5	15.50
12.0	6.00	3.000	96	6	3.75
12.5	6.25	3.125	100	6	8.00
13.0	6.50	3.250	104	6	12.00
13.5	6.75	3.375	108	7	0.25
14.0	7.00	3.500	112	7	4.25
14.5	7.25	3.625	116	7	8.25
15.0	7.50	3.750	120	7	12.50
15.5	7.75	3.875	124	8	1.00
16.0	8.00	4.000	128	8	5.00

Figure A-3 (*concluded*)

Abbreviations for Recipes (Unit Measure)

Unit of Measure	Abbreviation	Unit of Measure	Abbreviation
milliliter	ml	large	lge
demiliter	dm	medium	Med
Liter	L	small	Sm
package	pkg	inch	In
Weight	wt	minute	Min
volume	vol	gram	G
Gram	Gm	ounce	Oz.
Pound	Lb. or #	cup	Cup or C.
pint	pt.	quart	Qt.
Gallon	Gal.	each	Ea.
Fluid ounce	Fz	weight ounce	Wz
Count	Ct	Bunch	Bch.
Batch	B	Dozen	Doz.
teaspoon	Tsp. or t.	tablespoon	Tblsp., Tbl., or TBL.

Figure A-4

Abbreviations for Inventory

Abbreviation	Unit of Measure	Abbreviation	Unit of Measure
*	weight not available	bchd.	bunched
bskt.	basket	bu.	bushel
crt.	crate	ctn.	carton
contr.	container	hmpr.	hamper
lb.	pound	lyr.	layer
oz.	ounce	pk.	pack
pkg.	package	pt.	pint
sk.	sack	std.	standard
var.	various	wbd.	wirebound
wrpd.	wrapped		

Figure A-5

Other Abbreviations

Abbreviations	Unit of Measure
°F	degree Fahrenheit
°C	degree Celsius
psi	pressure per square inch
cm	centimeter
in.	inch
A.P.	as purchased
E.P.	edible portion (less preparation waste)

Figure A-6

Common Abbreviations and Descriptions

Abbreviation	Ingredient Description	Abbreviation	Ingredient Description
AMR	american	CRSNT	crescent
AST	assorted	CUBD	cubed
BLNCHD	blanched	DCD	diced
BM	bilmar	DETR	detergent

Figure A-7 (*continued*)

Common Abbreviations (*continued*)

Abbreviation	Ingredient Description	Abbreviation	Ingredient Description
BNLS	boneless	DRND	drained
BRDED	breaded	DRSG	dressing
BRKN	broken	DVL`S	devil`s
BRSKT	brisket	EA	each
BRST	breast	ENR	enriched
BTRSCH	butterscotch	FD	food
BUTR	butter	FLKD	flaked
BX	box	FRNCH STYL	french style
CAFF FREE	caffeine free	FRSH	fresh
CANADN	canadian	FRZ-DRY	freeze-dried
CAULFLWR	cauliflower	FURN	furniture
CHED	cheddar	GB	goldberger
CHIN	chinese	GERSTYL	german style
CHIPD	chipped	GM	general mills
CHLLD	chilled	GRHM	graham
CHOC	chocolate	GRN	green
CHOPD	chopped	GRND	ground
CKD	cooked	GRTD	grated
CLEAND	cleaned	HLF	half
CLEND & HULD	cleaned and hulled	HLVD	halved
COARSLY	coarsely	HLVS	halves
COTT	cottage	ICBRG	iceberg
CRMBLD	crumbled	IND	individual
CRNBRY	cranberry	INST	instant
CRND	corned	ITAL	italian
CRSHD	crushed	JUL	julienne

Figure A-7 (*continued*)

Common Abbreviations (*concluded*)

Abbreviation	Ingredient Description	Abbreviation	Ingredient Description
KELGS	Kellog's	PROV	provolone
LNTHWSE	lengthwise	PRTNS	portions
LO FT	low fat	PS	paper supplies
LO SOD	low sodium	PUR	purpose
LRG	large	QTRS	quarters
LT SYR	light syrup	RCH	Rich's
LVS	leaves	RGH	rough
MAND	Mandarin	RND	round
MARA	maraschino	RNSD	rinsed
MEX	Mexican	RSTD	roasted
MNCD	minced	S LEE	Sara Lee
MOZZ	mozzarella	SAND	sandwich
MSHD	mashed	SAUT	sauteed
MTLS	meatless	SCRD	scored
ND	nondairy	SDLS	seedless
NTRL	natural	SECT	sections
OZ	ounce	SED	seeded
PCKD	precooked	SEMISWT	semisweet
PCKLD	pickled	SOFTND	softened
PCS	pieces	SHRED	shredded
PELD	peeled	SHVD	shaved
PIZA	pizza	SIRLN	sirloin
PK	packet	SL	slices
PLD	pulled	SLCD	sliced
PLN	plain	SLCS	slices
PLSTC	plastic	SLD	solid
PNUT	peanut	SMKD	smoked
PR	pair	SNKA	Sanka
PRECKD	precooked	SP	spice
PREM	premium	SPLT	split

Figure A-7 (*concluded*)

Gram Weight Conversion Table

NOTE: When you know the weight ounces, multiply by 28.35 to find the grams. Divide the grams by 453.6 to find the pounds.

Ounces	Grams	Pounds	Grams
1	28.35	1	453.6
2	56.70	2	907.2
3	85.05	2.5	1134.0
4	113.40	3	1136.8
5	141.75	4	1814.4
6	170.10	5	2268.0
7	198.45	6	2721.6
8	226.80	7	3175.2
9	255.15	8	3628.8
10	283.50	9	4082.4
11	311.85	10	4536.0
12	340.20	15	6804.0
13	368.55	20	9072.0
14	396.90	25	11340.0
15	425.25	30	13608.0
16	453.60	35	15876.0
17	481.95		
18	510.30		
19	538.65		
20	567.00		
21	595.35		
22	623.70		
23	652.05		
24	680.40		

Figure A-8

Metric Size Fluids

Metric	U.S. FL. OZ.	3/4 Oz.	1 Oz.	1 –1/8 Oz.	1 –1/4 Oz.	1 –1/2 Oz.	Closest Previous Container (U.S. Oz.)
1.75 Liter	59.2	78.9	59.2	52.6	47.4	39.5	1/2 Gal. = 64 oz.
1.0 Liter	33.8	45.1	33.8	30.0	27.0	22.5	Qt. = 32 oz.
750 Milliliters	25.4	33.9	25.4	22.6	20.3	16.9	5th = 25.6 oz.
500 Milliliters	16.9	22.5	16.9	15.0	13.5	11.3	Pt. = 16 oz.
200 Milliliters	6.8	9.1	6.8	6.0	5.4	4.5	1/2 Pt. = 8 oz.
50 Milliliters	1.7						Miniature = 1.6 oz.

Figure A-9

Standard Measures References

Beverage Yield Chart: U.S. Measurement System

Size per Bottle	Quart	Yield per 1 –1/8 oz Drink	Yield per 1 –1/4 oz Drink	Yield per 1 –1/2 oz Drink
10/10	32.0 oz	28.3	25.6	21.3
9/10	28.8 oz	25.5	23.0	19.2
8/10	25.6 oz	22.7	20.5	17.1
7/10	22.4 oz	19.8	17.9	14.9
6/10	19.2 oz	17.0	15.4	12.8
5/10	16.0 oz	14.2	12.8	10.6
4/10	12.8 oz	11.3	10.2	8.5
3/10	9.6 oz	8.5	7.7	6.4
2/10	6.4 oz	5.7	5.1	4.3
1/10	3.2 oz	2.8	2.6	2.1

Size per Bottle	Fifth	Yield per 1 –1/8 oz Drink	Yield per 1 –1/4 oz Drink	Yield per 1 –1/2 oz Drink
10/10	25.6 oz	22.7	20.5	17.1
9/10	23.04 oz	20.4	18.4	15.4
8/10	20.48 oz	18.1	16.4	13.6
7/10	17.96 oz	15.9	14.4	12.0
6/10	15.36 oz	13.6	12.3	10.2
5/10	12.80 oz	11.3	10.2	8.5
4/10	10.24 oz	9.1	8.2	6.8
3/10	7.68 oz	6.8	6.2	5.1
2/10	5.12 oz	4.5	4.1	3.4
1/10	2.56 oz	2.3	2.1	1.7

Figure A-10 (*continued*)

Beverage Yield Chart: U.S. Measurement System (*continued*)

Size per Bottle	1/2 Gallon	Yield per 1 –1/8 oz Drink	Yield per 1 –1/4 oz Drink	Yield per 1 –1/2 oz Drink
10/10	64 oz	56.6	51.2	42.7
9/10	57.6 oz	51.0	46.1	38.4
8/10	51.2 oz	45.3	41.0	34.1
7/10	44.8 oz	39.6	35.8	29.9
6/10	38.4 oz	34.0	30.7	25.6
5/10	32.0 oz	28.3	25.6	21.3
4/10	25.6 oz	22.7	20.5	17.1
3/10	19.2 oz	17.0	15.4	12.8
2/10	12.8 oz	11.3	10.2	8.5
1/10	6.4 oz	5.7	5.1	4.3

Size per Bottle	Liter Ounces	Yield per 1 –1/8 oz Drink	Yield per 1 –1/4 oz Drink	Yield per 1 –1/2 oz Drink
10/10	33.8	29.9	27.0	22.5
9/10	30.4	26.9	24.3	20.3
8/10	27.04	23.9	21.6	18.0
7/10	23.66	20.9	18.9	15.8
6/10	20.28	18.0	16.2	13.5
5/10	16.90	15.0	13.5	11.3
4/10	13.52	12.0	10.8	9.0
3/10	10.14	9.0	8.1	6.8
2/10	6.76	6.0	5.4	4.5
1/10	3.38	3.0	2.7	2.3

Size per Bottle	750 ml Ounces	Yield per 1 –1/8 oz Drink	Yield per 1 –1/4 oz Drink	Yield per 1 –1/2 oz Drink
10/10	25.4	22.4	20.3	16.9
9/10	22.86	20.2	18.3	15.2
8/10	20.32	18.0	16.2	13.5
7/10	17.78	15.7	14.2	11.9
6/10	15.24	13.5	12.2	10.2
5/10	12.70	11.2	10.1	8.5
4/10	10.16	9.0	8.1	6.8
3/10	7.62	6.7	6.1	5.1
2/10	5.08	4.5	4.1	3.4
1/10	2.54	2.3	2.0	1.7

Figure A-10 (***continued on next page***)

Beverage Yield Chart: U.S. Measurement System (*concluded*)

Size per Bottle	1.75 liters Ounces	Yield per 1 −1/8 oz Drink	Yield per 1 −1/4 oz Drink	Yield per 1 −1/2 oz Drink
10/10	59.2	52.3	47.3	39.5
9/10	53.28	47.1	42.6	35.5
8/10	47.36	41.9	37.9	31.6
7/10	41.44	36.6	33.1	27.6
6/10	35.52	31.4	28.4	23.7
5/10	29.6	26.2	23.7	19.7
4/10	23.68	20.9	18.9	15.8
3/10	17.76	15.7	14.2	11.8
2/10	11.84	10.5	9.5	7.95
1/10	5.92	5.2	4.7	3.9

Figure A-10

Approximate Equivalents in Metric and U.S. Measures of Weight

Grams	Ounces	Pounds	Kilograms	Ounces	Pounds
1	0.035		0.756	26.67	1 2/3
5	0.175		0.793	28	1 3/4
15	0.525		0.832	29.33	1 5/6
28.35	1	1/16	0.850	30	
43	1.5		0.907	32	2
57	2	1/8	0.964	34	2 1/8
71	2.5		1.000	35.28	2 1/5
76	2.67	1/6	1.020	36	2 1/4
85	3		1.135	40	2 1/2
114	4	1/4	1.25	44	2 3/4
128	4.5		1.36	48	3
142	5		1.59	56	3 1/2
151	5.33	1/3	1.81	64	4
170	6		2.04	72	4 1/2
198	7		2.27	80	5
227	8	1/2	2.50	88	5 1/2

Figure A-11 (*continued*)

Approximate Equivalents (*concluded*)

Grams	Ounces	Pounds	Kilograms	Ounces	Pounds
255	9		2.72	96	6
283	10		2.95	104	6 1/2
302	10.67	2/3	3.18	112	7
312	11		3.63	128	8
340	12	3/4	4.08	144	9
368	13		4.54	160	10
378	13.33	5/6	5.44	192	12
397	14		5.90	208	13
425	15		6.35	224	14
454	16	1	7.26	256	16
510	18	1 1/8	8.17	288	18
529	18.67	1 1/6	9.07	320	20
567	20	1 1/4	10.89	384	24
605	21.33	1 1/3	12.70	448	28
623	22		13.60	480	30
681	24	1 1/2	14.51	512	32
737	26		18.14	640	40

Figure A-11 (*concluded*)

Equivalent Measures for Fluids

NOTE: This table gives measurement/weight equivalencies for water. Other liquids may vary.

3 Teaspoons	=	1 Tablespoon
16 Tablespoons	=	1 Cup
28.35 Grams	=	1 Ounce
1 Cup	=	1/2 Pint
2 Cups	=	1 Pint
2 Pints	=	1 Quart
4 Quarts	=	1 Gallon
768 Teaspoons	=	1 Gallon
1 lb (water)*	=	16 Fluid Ounces
1 lb (water)*	=	1 Fluid Pint
2 lb (water)*	=	1 Fluid Quart

Figure A-12

Volume Conversions for Recipe Writing

	Teaspoon	Tablespoon	Quart	Cup
1 Teaspoon	1.0	0.333333	0.0052083	0.020833
1 Tablespoon	3.0	1.0	0.015625	0.062500
1 Cup	48.0	16.0	.25	1.0
1 Pint	96.0	32.0	.50	2.0
1 Quart	192.0	64.0	1.0	4.0
1 Gallon	768.0	256.0	4.0	16.0

Figure A-13

Common Measurements and Conversions

Weight	Volume (Fz)	Count (Ct)
grams	teaspoons	each
ounces	cups	slices
pounds	pints	can
	quarts	bottle
	gallons	leaves

Figure A-14

Pounds and Ounces to Grams

Ounces	To	Grams	Pounds	To	Grams
1		28.35	1		453.60
5		141.75	5		2268
10		283.50	10		4536
12		340.20	25		11340
16		453.60	50		22680

Figure A-15

Teaspoon and Tablespoon

Teaspoons			Tablespoons		
3 Teaspoons	=	0.5 Ounce	1 Tablespoon	=	3 Teaspoons
6 Teaspoons	=	1 Ounce	2 Tablespoons	=	1 Ounce
48 Teaspoons	=	1 Cup	4 Tablespoons	=	.25 Cup
96 Teaspoons	=	1 Pint	8 Tablespoons	=	.5 Cup
192 Teaspoons	=	1 Quart	16 Tablespoons	=	1 Cup
960 Teaspoons	=	5 Quarts	128 Tablespoons	=	.5 Gallon
768 Teaspoons	=	1 Gallon	256 Tablespoons	=	1 Gallon

Figure A-16

Metric Equivalents: Weights

1 Gram	0.3547 Wz	1 Wz	28.35 Grams
1 Kilogram	2.2046 Pounds	1 Pound	0.454 Kilograms
1 Metric Ton	1.1023 English	1 English Ton	0.9072 Tons
1 Kilogram	1000 Grams		

Figure A-17

Dry Measures

2 pints	1 quart	4 pecks	1 bushel
8 quarts	1 peck	36 bushels	1 chaldron
28.35 grams	1 WZ	8 WZ	.5 pound
226.80 grams	8 WZ	16 WZ	1 pound
453.60 grams	16 WZ		

Figure A-18

Liquid Measures

3 teaspoons	1 tablespoon	2 pints	1 quart
16 tablespoons	1 cup	4 quarts	1 gallon
2 cups	1 pint	31 ½ gallons	1 barrel
4 gills	1 pint	2 barrels	1 hogshed

Figure A-19

Other Equivalencies

1 pound	16 WZ
1 cup	8 FZ
1 pint	2 cups (16 FZ)
1 quart	2 pints (32 FZ)
1/2 gallon	2 quarts (64 FZ)
1 gallon	4 quarts (128 FZ)

Figure A-20

Avoirdupois

16 drams	1 WZ	112 pounds	1 long hundredweight (CWT)
16 ounces	1 pound	4 quarters	1 hundredweight
25 pounds	1 quarter	2000 pounds	1 short ton
100 pounds	1 short hundredweight (CWT)	2240 pounds	1 long ton

Figure A-21

Measure of Volume

1 Cu. Centimeter	=	0.061 Cu. Inch	1 Cu. Inch	=	16.39 Cu. Centimeters
1 Cu. Decimeter	=	0.353 Cu. Foot	1 Cu. Foot	=	28.317 Cu. Decimeters
1 Cu. Meter	=	1.308 Cu. Yard	1 Cu. Yard	=	0.7646 Cu. Meter
1 Ster	=	0.2759 Cord	1 Cord	=	3.642 Steres
1 Liter	=	0.908 QuartDry	1 Quart Dry	=	1.101 Liters
1 Liter	=	1.0567 Quarts Liquid	1 Quart Liquid	=	0.3785 Liter
1 Dekaliter	=	2.6417 Gallons	1 Gallon	=	0.3785 Dekaliter
1 Dekaliter	=	0.135 Peck	1 Peck	=	0.881 Dekaliter
1 Hektoliter	=	2.8375 Bushels	1 Bushel	=	3.524 Hektoliters

Figure A-22

Linear Measure

1 Centimeter	=	0.3937 Inch	1 Inch	=	2.54 Centimeters
1 Decimeter	=	0.328 Feet	1 Foot	=	3.048 Decimeters
1 Meter	=	1.0936 Yards	1 Yard	=	0.9144 Meter
1 Dekameter	=	1.9884 Rods	1 Rod	=	0.5029 Dekameter
1 Kilometer	=	0.62137 Mile	1 Mile	=	1.6093 Kilometers

Figure A-23

Square Measure

1 Sq. Centimeter	=	0.1550 Sq. Inch	1 Sq. Inch	=	6.452 Sq. Centimeters
1 Sq. Decimter	=	0.1076 Sq. Inch	1 Sq. Foot	=	9.2903 Sq. Decimeters
1 Sq. Meter	=	1.196 Sq. Yards	1 Sq. Yard	=	0.8361 Sq. Meter
1 Acre	=	3.954 Sq. Rods	1sq. Rod	=	0.2529 Acres
1 Hectare	=	2.47 Acres	1 Acre	=	0.4047 Hectare
1 Sq. Kilometer	=	0.386 Sq. Mile	1 Sq. Mile	=	2.59 Sq. Kilometers

Figure A-24

Fractional Equivalents for Use in Converting Recipes

The following chart is designed to help you change fractional parts of pounds, gallons, cups, etc., to accurate weights or measures. For example, reading from left to right, the table shows that 7/8 of a pound is 14 ounces, 1/3 of a gallon is 1 quart plus 1 1/3 cups, 1/16 of a cup is 1 tablespoon, and so on.

	1 Tablespoon	1 cup	1 pint	1 quart	1 gallon	1 pound
1	3 tsp.	16 TBL.	2 cups	2 pints	4 quarts	16 WZ
7/8	2 1/2 tsp.	1 cup less 2 TBL	1 2/3 cups	3 1/2 cups	3 quarts + 1 pint	14 WZ
3/4	2 1/4 tsp.	12 TBL.	1 1/2 cups	3 cups	3 quarts	12 WZ
2/3	2 tsp.	10 TBL. + 2 tsp.	1 1/3 cups	2 2/3 cups	2 quarts + 2 2/3 cups	10 2/3 WZ
5/8	2 tsp. (scant)	10 TBL.	1 1/4 cups	2 1/2 cups	2quarts + 1 pint	10 WZ
1/2	1 1/2 tsp.	8 TBL.	1 cup	2 cups	2 quarts	8 WZ
3/8	1 1/8 tsp.	6 TBL.	3/4 cup	1 1/2 cups	1 quart + 1 pint	6 WZ
1/3	1 tsp.	5 TBL. + 1 tsp.	2/3 cup	1 1/3 cups	1 quart + 1 1/3 cups	5 1/3 WZ
1/4	3/4 tsp.	4 TBL.	1/2 cup	1 cup	1 quart	4 WZ
1/8	1/2 tsp. (scant)	2 TBL.	1/4 cup	1/2 cup	1 pint	2 WZ
1/16	1/4 tsp. (scant)	1 TBL.	2 TBL.	4 TBL.	1 cup	1 WZ

Figure A-25

Food Portioning Aids

Hint: A pastry bag with tip may be used for portioning meringue for shells, filling cream puffs, stuffing eggs, and adding dressing to salads.

Item	Size	Use	Gram	Oz.	Tsp.	Tbsp.	Cup
Scoop	No. 100	Dainty cookies	10	0.35	2	2/3	1/48
	No. 70	Small drop cookies	11	1/8	2	2/3	1/48
	No. 60	Small drop cookies	15	1/2	3	1	1/16
	No. 40	Medium drop cookies	23	2/5	5	1 3/5	
	No. 30	Large drop cookies	28.35	1	6	2	1/8
	No. 24	Sandwich or cream puff pudding	38	1 1/2	8	2 2/3	
	No. 20	Sandwich fillings, salads, muffins, desserts	42	1 1/2	10	3 1/3	
	No. 16	Entrees, muffins, desserts	57	2	12	4	1/4
	No. 12	Entrees, salads, croquettes, vegetables	76	2 2/3	14	4 2/3	1/3
	No. 10	Meat patties, cereals, croquettes, vegetables	92	3 1/4	19 1/2	6 1/2	3/8
	No. 8	Meat patties and casserole dishes	114	4	24	8	1/2
	No. 6	Main dish salads	170	6	36	12	3/4

Figure A-26 (*continued on next page*)

Food Portioning Aids (*concluded*)

Item	Size	Use	Gram	Oz.	Tsp.	Tbsp.	Cup
Ladles	1FZ	Sauces, relishes	228.35	1	6	2	1/8
	2FZ	Gravy, sauces	57	2	12	4	1/4
	4 FZ	Creamed dishes and vegetables	114	4	24	8	1/2
	6 FZ	Stews, baked dishes, chili, creamed dishes, vegetables, soups, chili, stews	170	6	36	12	3/4
	8 WZ	Soups, chili, stews	227	8	48	16	1
	12 WZ	Large soups, goulash	340	12	72	24	1 1/2
	24 WZ	Kitchen dipper	681	24	144	48	3
	32 WZ	Quart dipper	907	32	192	64	4
Demiliter			496	17 1/2	105	35	2 1/16
Liter			1000	35.28	210	70	4 1/8
2 Quart			1990	64	384	128	8

Figure A-26

Critical Temperatures for Quality Control

Degrees Fahrenheit	Produces
212°	Water boils at sea level. Most resistant bacteria killed within 2 minutes.
195°	Water above this point sprayed from dish washing machine rinse nozzles vaporizes so readily that rinse action is reduced.
180°	Water at this temperature in rinse line of the dishwasher will give 170 F°—killing temperature—at utensil.
170°	Practically all common disease-producing bacteria killed at this temperature.
160°	Some foods start to cook on utensils here.
140°	Bacterial growth practically stopped. May die.
98.6°	Body temperature. Bacteria`s most rapid growth.
70°	Room temperature. Bacteria grow fast.
50°	Bacterial growth slowed greatly; almost stopped below this point.
45°–40°	Store fruits and vegetables.
37°–33°	Store dairy products.
36°–33°	Store meat and poultry.
32°	Freezing point of water. Practically no bacterial growth.
30°–23°	Store fish and shellfish.
10°–6°	Store ice cream.
0°–10°	Store frozen foods.

Figure A-27

Canned Goods Information

Canned Goods Overview

Some excellent reasons for using canned fruits and vegetables include the following:

- less expensive than fresh produce
- easy storage—no refrigeration required
- wide variety available all year
- no waste—everything in the can is edible
- little or no preparation required
- quantities needed easily calculated
- portion cost easily calculated
- immediately available in emergency

Are Canned Goods Less Nutritious Than Fresh?

The attention given to "freshness" by some gourmets and food writers have made many of us feel that we are doing something wrong when we use canned or frozen foods. Fresh local products certainly taste better and are nutritionally superior to preserved foods. But when the so-called "fresh" foods have actually been plucked before they are ripe, trucked thousands of miles to market, and perhaps stored for a time before you buy them, the advantage of "freshness" is extremely low. The fact is that canning and freezing, when done properly, preserve most of the vitamins, minerals, and flavor of the original. In addition, canning and freezing make it possible for you to have year-round variety in your daily diet, with plenty of fruits and vegetables, even in midwinter, at less cost than fresh ones flown in out of season from faraway places. We would face far greater troubles in feeding this nation and the world if it were not for modern methods of preserving foods.

Grades

The most important factor in considering canned goods is the grade, or quality. The different qualities of a product are the top qualities, the next-to-the-top qualities, and the lower qualities. The grade names used for expressing these qualities are the letters A, B, and C. The corresponding canning industry grade names are Fancy, Choice, Extra Standard, and Standard.

For some products, only two grades, A and B, have been developed. Peas and carrots are an example. Some products, such as asparagus and apples, do not have a B grade. Mostly, the grades run from A through C.

Grade A or Fancy: Excellent high-quality foods. Practically uniform in size, color, and texture. Practically free from defects. Grade A products are carefully selected as to size, color, texture, uniformity, and other qualities.

Grade B or Choice (for fruits) and Extra Standard (for vegetables): High-quality foods. Reasonably uniform in size, color, and texture. Reasonably free from defects. Vegetables are more mature, fruits less uniform.

Packing Media

Densities of syrups differ according to the fruit being canned. Some fruits, such as berries, can carry a very heavy syrup, while others, such as pears, would break down in a very heavy

syrup. The density is measured by Brix instruments known as the Brix Hydrometer and/or refractometer, and is expressed in terms of degrees. For example: the cut-out density of syrup in choice peaches is expressed as "brix cut-out" 18 degrees or more but less than 22 degrees; 1 degree brix equals approximately 1 percent sugar by weight. The difference between in-going and cut out densities is due to the natural blending or equalization of the juice of the fruit and the syrup and also to the absorption of the sugar by the fruit after canning. An in-going syrup of 50 degrees will cut out 22 degrees or more. Such tests are always made 15 days or more after the product is canned. The following packing media are used:

- *Brine solution* is added to most vegetables. Brine solution may be water and small amounts of salt; or the solution may be water and small amounts of sugar and salt and be used for flavoring such products as peas and corn.
- *Natural juices* from the product are sometimes added. Pineapple and tomatoes are examples of foods to which natural juices from the product are added. Other natural fruit juices are added to special packs of fruit. These have lower sugar and sweetness than light syrup, but slightly more than water pack, and have far better palatability and are still acceptable for most sugar-controlled diets. "Solid pack" (SP) products have no liquid added, such as, preheated SP pie, peaches, or apricots. (These are regulated by federal law.)
- *Plain water* is used for "salt-controlled" dietetic packs of vegetables, for "reduced" or "low caloric" dietetic fruits, and for pie pack fruits.

Syrups are used almost entirely for fruits and/or sweet potatoes. Usually, the syrup density varies according to the grade; that is, the syrup with the greatest amount of sugar is used for the best grades and sugar content decreases with the grade. However, higher costs and a trend toward less sugar in the diet is leading to an ever-increasing amount of choice in light syrup or choice in juice fruits. Typically, the following applies:

Extra Heavy Syrup	Fancy Grade Fruit
Heavy Syrup	Choice Grade Fruit
Light Syrup	Standard Grade Fruit
Water	Dietetic Fruits and Vegetables; Pie Fruit

What Is "Drained Weight"?

Simply speaking, drained weight is the net weight of a portion of fruit or vegetable after the syrup, juice, or water is drained off for two minutes through a colander-like sieve. It is important to know the drained weight of a product packed in a liquid medium. Recommended minimum drained weights are included in the federal standards and are published in other sections of this guide.

How to Determine Drained Weights

For a No. 10 can of fruit or vegetables, use a circular sieve with vertical sides, 12 inches in diameter, with 8 meshes to the inch. For a No. 2 1/2 can (and smaller), use a sieve 8 inches in diameter, with 8 meshes to the inch. For tomatoes only use similar sieves, with 2 meshes to the inch. For all products, record the weight of the sieve. Set the sieve over the pan in an inclined position. Empty the contents of the can in the screen so as to distribute the contents evenly. Promptly weigh the screen with the contents inside. Subtract the weight of the empty screen; the difference is the drained weight of the product. If a screen of the foregoing type is not available, use a colander.

Containers

Containers normally are variously-sized cans that may be plain or enamel-lined on the inside. Tin cans are made of steel that has been coated inside and out with tin. Enamel linings may be yellow or gray in color and are used for foods that can cause an unfavorable reaction with tin. There are many types of enamel linings. One type is used for red-colored foods, such as beets and berries, in which the color tends to bleed out when in contact with tin; another type is used for foods containing sulphur, such as corn. These foods could discolor the inside of a plain can, and sometimes the food itself is discolored. A third type of can has an enamel liner inside with a strip of tin (approximately 1/16 inch) along the inside seam. This is called an HTF can (high tin fillet). This type is now used in canning asparagus.

Can Equivalents		
One #10 can	equals approximately	7/#300 cans
One #10 can	equals approximately	6/#303 cans
One #10 can	equals approximately	5/#2 cans
One #10 can	equals approximately	4/#2 1/2 cans
One #10 can	equals approximately	2 1/4/#3 Cyl. cans

Sizes: Counts

Size refers to sieve size, or girth of an item. Range of count refers to number of pieces in a can. The sizes of fruit are designated by the numerical count, according to the size of the can, for instance, 6/#10 Peaches, 30/35 count; or 6/#10 apricots, 86/108 count.

Sieve sizes and actual sizes are used to designate the sizes of vegetables: 5 Sv. peas; 4 Sv. beans; medium slices carrots; tiny whole beets; mammoth asparagus; medium olives, and so forth. In fruits, usually the larger the size, the higher the grade. In vegetables, the reverse is usually true: The larger the size, the lower the grade.

Fill of Container

Unless defined by Food and Drug regulations, the USDA grades recommend generally that cans be filled as full as practicable without impairment of quality, and that the product and packing medium occupy not less than 90 percent of the capacity of the can. For all practical purposes, this is determined by measuring the head space inside the can. Head space is measured from the top of the double seam down to the surface of the product in the can.

FDA regulations have defined the fill of container for only a few canned fruits and vegetables. Containers that fail to meet those requirements must be labeled "below standard in fill."

Maximum Gross Head-space Permitted to Avoid a Charge of Slack Filling

Can Size	Maximum Gross Headspace in Thirty-seconds of an Inch
No. 300	19
No. 303	19
No. 2	19
No. 2 1/2	20
No. 3 Cylinder	27
No. 10	27

Figure A-28

Common Can Sizes and Their Appropriate Contents

Can Size	Principal Products
No. 5 squat	
75 oz. Squat	
No. 10	Institution size-fruits, vegetables, and some other foods
No. 3 Cyl	Institution size-condensed soups, some vegetables; meat and poultry products; economy family-size fruit and vegetable juices
No. 2 1/2	Family size-fruits, some vegetables
No. 2	Family size-juices, ready-to-serve soups, and some fruits
No. 303	Small cans-fruits, vegetables, some meat and poultry products, and ready-to-serve soups
No. 300	Small cans-some fruits and meat products
No. 2 (vacuum)	Principally for vacuum pack corn
No. 1 (picnic)	Small cans-condensed soups, some fruits, vegetables, meat, and fish
8 oz.	Small cans-ready-to-serve soups, fruits, and vegetables
6 oz.	

Figure A-29

Common Can Sizes and Their Appropriate Weights and Volumes

*Volumes represent total water capacity of the can. Actual volume of the pack would depend upon the contents and the head space from the fluid level to the top of the can.

Can Size	Volume (WZ)	Average Fluid (FZ)	Average Cups	Cans per Case	Approx. Weight
75 Squat				6	4 LB 11 WZ
No. 5	56			6	4 LB 2 WZ
No. 10	105.1	99 to 117	12 to 13	6	6 LB 9 WZ
No. 3 Cyl.	49.6	51 or 46	5 3/4	12	46 FL. WZ
No. 2 1/2	28.55	27 to 29	3 1/2	24	12 WZ
No. 2	19.7	20 or 18	2 1/2	24	1 LB 13 WZ
No. 303	16.2	16 or 17	2	24 or 36	1 LB
No. 300	14.6	14 or 16	1 3/4	24	15 1/2 WZ
No. 2 (vacuum)		12	1 1/2	24	
No. 1		10 1/2 to 12	1 1/4	48	
8 oz.	8.3	8	1	48 or 72	8 WZ
6 oz.	5.8	6	3/4	48	6 WZ

Figure A-30

Can Equivalencies

Can Size	Equivalent
1 #10 Can	2 1/4 #3 Cyl.
	4 #2.5 Cans
	5 #2 Cans
	6 #303 Cans
	7 #300 Cans

Figure A-31

Spices/Seasoning Conversion

Measuring Equivalents

Teaspoons	Tablespoons	Fluid Ounces	Cups	Scoops	Fluid Measure
3	1	1/2			
6	2	1	1/8	30	
12	4	2	1/4	16	
15	5	2 1/2	1/3	12	
	6 2/3	3 1/2 to 4	2/5	10	
	8	4	1/2	8	
	10	5	2/3		
	12	6	3/4		
	14	7	7/8		
	16	8	1		1/2 pint
	18	9	1 1/8		
		12	1 1/2		3/4 pint
		16	2		
		24	3		1 1/2 pint
		32	4		1 quart
		64	8		2 quarts
		128	16		1 gallon

Figure A-32

Spice/Seasoning Conversions for Recipe Writing Ingredient Weights

Ingredient	Weight of 1 Teaspoon in a Decimal Part of a Pound
Allspice (ground)	0.0039164
Baking powder	0.0078085
Baking soda	0.0078085
Basil leaves	0.0013020
Bay leaves (whole—approx. 1361 leaves/pound)	0.0013020
Caraway seeds	0.0053232
Cayenne pepper	0.0035215
Celery seeds (whole)	0.0052083
Chili powder	0.0054766
Cinnamon (ground)	0.0047608
Cloves (ground)	0.0033952
Cloves (whole)	0.0044363
Cream of tartar	0.0083060
Cumin (ground)	0.0035216
Curry powder	0.0044363
Dill seed	0.0054659
Garlic powder	0.0032491
Ginger (ground)	0.0035213
Mace (ground)	0.0039160
Marjoram (ground)	0.0026041
MSG	0.0078085
Mustard (dry)	0.0032491
Nutmeg (ground)	0.0113928

Figure A-33 (*continued*)

Ingredient Weights (*concluded*)

Ingredient	Weight of 1 Teaspoon in a Decimal Part of a Pound
Onions (dehydrated)	0.0031243
Oregano (ground)	0.0031243
Paprika	0.0043767
Parsley Flakes (dehydrated)	0.0008680
Pepper, Black (ground)	0.0051772
Pepper, Black (whole)	0.0078085
Pepper, Red (crushed)	0.0047091
Pepper, White (ground)	0.0051162
Pickling Spices (whole)	0.0033952
Poppy Seed	0.0054659
Poultry Seasoning	0.0026041
Rosemary Leaves (whole)	0.0026041
Sage, Rubbed	0.0019580
Salt, Celery	0.0091214
Salt, Garlic	0.0092510
Salt, Onion	0.0087241
Salt, Table	0.0104166
Seafood Seasoning	0.0098085
Sesame Seeds (whole)	0.0052083
Sugar, Brown	0.0091214
Sugar, Confectionery (6x)	0.0047608
Sugar, Granulated	0.0091214
Tarragon Leaves (whole)	0.0013020
Thyme Leaf (whole)	0.0019580

Figure A-33 (*concluded*)

Spices and Their Conversions

Ingredient	Weight Ounce	Tablespoon	Teaspoon	Count
Allspice ground	1 WZ	4.725 TBSP	14.77 TSP	
Allspice whole	1 WZ	6 TBSP	18 TSP	
Anise Seed	1 WZ	4.231	12.69 TSP	
Arrowroot	1 WZ	4 TBSP	12 TSP	
Baking Powder	1 WZ	2.667 TBSP	8 TSP	
Baking Soda	1 WZ	2.667 TBSP	8 TSP	
Basil Leaves	1 WZ	15.873 TBSP	47.619 TSP	
Basil grd	1WZ	6.3 TBSP	18.9 TSP	
Bay Leaves crm	1 WZ	15.75 TBSP	47.25 TSP	
Bay Leaf whl	1 WZ	142.85 EA		
Capers whl	1 WZ	2.667 TBSP	8.001 TSP	10–15 TSP
Caraway Seed grd	1 WZ	5.319 TBSP	15.957 TSP	
Caraway Seed whl	1 WZ	4.232 TBSP	12.696 TSP	
Cardamom Seed grd	1 WZ	4.890 TBSP	14.67 TSP	
Cassia Buds	1 WZ	4 TBSP	12.048 TSP	
Celery Flakes drd	1 WZ	21.33 TBSP	64 TSP	
Celery Salt	1 WZ	3 TBSP	9 TSP	
Celery Seed grd	1 WZ	7 TBSP	21 TSP	
Celery Seed whl	1 WZ	4.363 TBSP	13.089 TSP	
Chervil drd	1 WZ	15.873 TBSP	47.619 TSP	
Chili Powder	1 WZ	4.016 TBSP	12.048 TSP	
Chinese 5 Spice				
Chives freeze drd	1 WZ	6.4 TBSP	19.2 TSP	
Cinnamon grd	1 WZ	4.169 TBSP	12.50 TSP	
Cinnamon sticks	1 WZ	5 sticks		
Cloves grd	1 WZ	4.296 TBSP	12.885 TSP	
Cloves whl	1 WZ	90 CT		
Cocoa	1 WZ	4 TBSP	12 TSP	

Figure A-34 (*continued*)

Spices and Their Conversions (*continued*)

Ingredient	Weight Ounce	Tablespoon	Teaspoon	Count
Coriander Seed	1 WZ	5.670 TBSP	17.01 TSP	
Corn Meal	1 WZ	3 TBSP	9 TSP	
Cornstarch	1 WZ	13.545 TSP		
Cream of Tartar	1 WZ	3.003 TBSP	9.009 TSP	
Cumin grd	1 WZ	4 TBSP	12 TSP	
Cumin seed	1 WZ	4.975 TBSP	14.925 TSP	
Curry Powder	1 WZ	4.566 TBSP	13.698 TSP	
Dill seed	1 WZ	4.295 TBSP	12.885 TSP	
Dill Weed	1 WZ	9.146 TBSP	27.438 TSP	
Fennel Seed	1 WZ	4.89 TBSP	14.67 TSP	
Fenugreek Seed	1 WZ	2.554 TBSP	7.662 TSP	
Gumbo File	1 WZ	7 TBSP	21 TSP	
Garlic Granulated	1 WZ	2.5 TBSP	7.5 TSP	
Garlic Powder	1 WZ	3.375 TBSP	10.125 TSP	8 Cloves
Garlic Powder	1 WZ	2.5 TBSP	7.5 TSP	
Ginger, candied	1 WZ	2 TBSP	6 TSP	
Ginger crystals	1 WZ	2.667 TBSP	8.001 TSP	
Ginger grd	1 WZ	5.250 TBSP	15.75 TSP	
Horseradish	1 WZ	2 TBSP	6 TSP	
Italian Seasoning	1 WZ			
Leeks fr drd	1 WZ	142.86 TBSP	428.58 TSP	
Mace grd	1 WZ	5.349 TBSP	16.047 TSP	
Marjoram drd	1 WZ	16.677 TBSP	50.031 TSP	
Monosodium Glut.	1 WZ	1.89 TBSP	5.67 TSP	
Mustard creole	1 WZ	2 TBSP	6 TSP	
Mustard grd	1 WZ	4.050 TBSP	12.15 TSP	
Mustard seed	1 WZ	2.532 TBSP	7.596 TSP	

Figure A-34 (***continued on next page***)

Spices and Their Conversions (*continued*)

Ingredient	Weight Ounce	Tablespoon	Teaspoon	Count
Mustard prepared	1 WZ	2 TBSP	6 TSP	
Nutmeg grd	1 WZ	4.050 TBSP	12.15 TSP	
Onions Dehydrated	1 WZ	5.672 TBSP	17.016 TSP	
Onion Salt	1 WZ	2 TBSP	6 TSP	
Onion Powder	1 WZ	4.362 TBSP	13.086 TSP	
Oregano grd	1 WZ	6.300 TBSP	18.9 TSP	
Oregano whl	1 WZ	16 TBSP	48 TSP	
Paprika	1 WZ	4.109 TBSP	12.327 TSP	
Parsley Flakes drd	1 WZ	21.810 TBSP	65.43 TSP	
Parsley Flakes fr drd	1 WZ	70.921 TBSP	212.763 TSP	
Pepper black	1 WZ	4.430 TBSP	13.29 TSP	
Pepper grd	1 WZ	3.20 TBSP	9.6 TSP	
Pepper whl	1 WZ	5.349 TBSP	16.047 TSP	
Pepper cayenne grd	1 WZ	4.83 TBSP	14.49 TSP	
Pepper green	1 WZ	12 TBSP	36 TSP	
Pepper green glks	1 WZ	60 Per Portion		
Pepper lemon	1 WZ	6 TBSP	18 TSP	
Pepper red cruched	1 WZ	4.667 TBSP	14 TSP	
Pepper white	1 WZ	3.993 TBSP	11.979 TSP	
Pepper white grd	1 WZ	3.20 TBSP	9.60 TSP	
Peppercorns whl blk	1 WZ	6 TBSP	18 TSP	90
Peppercorns green	1 WZ			
Poppy Seed	1 WZ	3.222 TBSP	9.666 TSP	
Poultry Seasoning grd	1 WZ	7.662 TBSP	22.986 TSP	
Poultry Seasoning whl	1 WZ	8 TBSP	24 TSP	

Figure A-34 (*continued*)

Spices and Their Conversions (*concluded*)

Ingredient	Weight Ounce	Tablespoon	Teaspoon	Count
Pumpkin Pie	1 WZ	5.062 TBSP	15.186 TSP	
Rosemary dried	1 WZ	8.591 TBSP	25.707 TSP	
Saffron	1 WZ	13.514 TBSP	9.6 TSP	
Sage grd	1 WZ	14.184 TBSP	42.5 TSP	
Sage grd fine	1 WZ	8 TBSP	24 TSP	
Sage rubbed	1 WZ	12 TBSP	36 TSP	
Sage rubbed pkd	1 WZ	8 TBSP	24 TSP	
Sage whl	1 WZ	16 TBSP	48 TSP	
Salad Herbs	1 WZ	12 TBSP	36 TSP	
Salt	1 WZ	2 TBSP	6 TSP	
Salt Seasoned	1 WZ	1.667 TBSP	5.001 TSP	
Salt and Pepper Mix	1 WZ	1.667 TBSP	5.001 TSP	
Sausage Seasoning	1 WZ	5 TBSP	15 TSP	
Savory grd	1 WZ	6.443 TBSP	19.329 TSP	
Savory whl	1 WZ	12 TBSP	36 TSP	
Sesame Seeds	1 WZ	3.544 TBSP	10.63 TSP	
Tarragon leaf	1 WZ	16 TBSP	48 TSP	
Tarragon grd	1 WZ	5.907 TBSP	17.721 TSP	
Thyme leaf	1 WZ	8 TBSP	24 TSP	
Thyme grd	1 WZ	6.593 TBSP	19.779 TSP	
Tumeric	1 WZ	3.334 TBSP	10.002 TSP	

Figure A-34 (*concluded*)

Meat/Seafood Prep Yields

Meat Prep Yields: Raw, Trimmed, and Cooked

Description in Pounds	Best Weight Raw Trimmed	Prep Yield Cooked (%)	Prep Yield (%)
PORK			
Ham boneless (skin removed)	7	98	71
Ham shank (half bone in)	10 to 14	60	57
Loin (bone in whole)	14 to 17	70	54
Loin (boneless whole)	8	95	74
Ham butt (half bone in)	5 to 8	63	42
Shoulder picnic (bone in)	12	77	39
Sausage	10	48	
Spareribs	58	48	
Liver	92	66	
Heart	93	57	
Tongue	65	50	
CHICKEN			
Chicken (whole)	78	51	
Breast (skin on)	74	63	
Breast (skinless)	65	46	
Drumsticks	42		
Tights	45		
Heart	58		
Liver	57		
TURKEY			
Turkey (whole)	84	61	
Neck and Giblets	77	50	
Breast (quarters)	75	48	
Breast (whole)	87	55	
Leg (quarters)	75	45	
BEEF			
Flank steak	2 to 2 1/2	94.5	75
Gooseneck bottom round	26 to 29	78	65

Figure A-35 (*continued*)

Meat Prep Yields: Raw, Trimmed, and Cooked (*concluded*)

Description in Pounds	Best Weight Raw Trimmed	Prep Yield Cooked (%)	Prep Yield (%)
Hamburger	10	80	
Blade meat	2 1/2	95	
Brisket	10 to 12	71	52
Chuck roll	13 to 15	85	68
Chuck shoulder clod	16	70	53.5
Eye round	5 to 6	88	84
Fillet tips	6 to 7	90	76
Knuckle	80	58	
Rib eye roll	96	81	
Rib (oven ready boneless)	98	56	
Rib (oven ready bone in)	96	81	
Sirloin butt top	65		
Strip lean boneless	87.5	75	
Tenderloin fillet	83	80	
Top round	93	77	
Tongue	78	56	
Liver	93	89	
Heart	72	54	
LAMB			
Ground	68		
Leg (bone in)	45		
Leg (boneless)	70		
Shoulder (bone in)	57		
Shoulder (boneless)	73		
VEAL			
Ground	65		
Leg (cutlets boneless)	70		
Leg (bone in)	49		
Leg (boneless)	60		

Figure A-35 (*concluded*)

Seafood Prep Yields

Description	Prep Yield (%)	Description	Prep Yield (%)
Bass	40	Lobster (New England-American)	25
Bluefish	52	Lobster (spiny-tails only)	46
Catfish	95.4	Mackerel	54
Corvina	94	Mahi	94
Calms (breaded fried)	85	Mahi (head on)	55–60
Clams (hard)	14	Mahi (head off)	78.5
Clams (soft)	29	Monk	85
Clams (sucked)	48	N-T King	65–68
Cod	31	Ohi	92
Crab (blue)	10–18	Ono	95
Crabcakes (fried)	95	Opaka (whole)	92.5
Crab (dungeness)	22–26	Oysters	40
Crabmeat	97	Oysters (breaded raw)	88
Fish fillets (species variation)	64	Oysters (whole)	100
Flounder	40	Petrale	98
Gulf (fillet)	88	Perch	36
Gulf (whole)	46	Sole	72
Haddock	48	Pinobass	93.5
Halibut (fillet)	97	Pollock	45
Halibut (small 40–60 lbs)	50–60	Pompario	52
Halibut (large 80–120 lbs)	65–67	Redfillet	93.5
Halibut (whole)	59	Red (whole)	61
Ling Cod	96	Roughy	92.5
Lobster (cooked in shell)	25	Salmon	65–75
Salmon (fillet)	94–96	Spear	92.5
Salmon (large king whole)	61–64	Steel Head Salmon	52–60
Scallops (breaded fried)	90	Sword	94.2
Scallops (raw)	81	Trout	90
Scrod	94	White Sea Bass	96
Shark	96	Y-Tail (fillet)	95.2
Shark (skin on)	91	Y-Tail (whole)	62
Snapper	94		

Figure A-36

Produce Prep Yields

Description	Packing Size	Prep Yield	Avg. Weight per Case	Avg. Counts per Pound
Apples (peeled & cored)	Box 113	70–76	37–40	3
Asparagus	Pound	49–56	1	10–20
Avocados	1 lyr ctrn tray pack	60–75	13–14	2 med
Avocados	36–40 ct	60–75	19	2 med
Banana	Ctns	68	40	3
Beans (green or wax)	bu wbd crts	86	26–36	
Beans (in pod)	39			
Beets	wbd crt 24 bchs	76	36–40	
Berries	12 1/2 pts	93	5 1/2–7 1/2	
Blueberries	12 pt trays	84–92	11–12	
Broccoli	18 bunches	42–62	40–42	1 = 1.25 lbs
Broccoli	14 bunches	42–62	20–23	1 = 1.25 lbs
Brussel Sprouts	ctns wax treated loose pk	74–77	25	
Cabbage (green)	24 heads	79	50–55	1 = 1.25 lbs
Cantaloupe	9, 12, 18, 23 ct	50–60	38–41	1 med
Cantaloupe	18, 24, 30 ct	50–60	53–55	
Carrot (stick 3″)	100	150/#		
Carrot (w/o tops)	50 bag	75–92	50	
Carrot (bchd)	ctn 2 doz bchs	82	23–27	
Cauliflower (trimmed)	12–16 head film wrpd	95	23	
Cauliflower (untrimmed)	Long Island type crt	31–45	45–50	1 med
Celery (stick 3″)	100	150/#		
Celery (whole)	24 stacks	71–75	55–65	1 = 2 lbs
Celery (bchd)	flat wbd crt	70	55–60	
Celery hearts	12 film bagt in crt	95	24–28	
Chard	77			
Cherries (pitted)	cnts	79–89	16–20	
Coconuts	burlap bag 40–50	45	75–80	
Corn (sweet on the cob)	wbd crt 54–66 ct	40	40–60	
Crenshaw	flat crt	35–50		
Cucumber (pared)	ctns place pk or LA lug 24 ct	92	30	
Cucumber (unpared)	72–73	30	1.5 med	
Dates (fresh)	45			

Figure A-37 (*continued on next page*)

Produce Prep Yields (*continued*)

Description	Packing Size	Prep Yield	Avg. Weight per Case	Avg. Counts per Pound
Eggplant	bu bskt or ctn	75	30–34	
Endive	ctns 8 wbd crt 24 pk	74–75	35–40	1 = 1.6 lbs
Garlic	telescope ctns loose pk	81	30	15 pods
Grapefruit (sectioned)	cs = 36 ct	47–48	34–36	1
Grapes (red seedless)	lug or ctn	96	24–28	91
Grapes (white seedless)	lug 16,22,24 wrpd bchs	96	22	85
Honeydew	flat crt 12 ct	56–60	28–32	1 = 2.5 lbs
Kale	18–25 lb bchs p/ct	74–81	20.5	
Leeks	12 bch p/ct	50	25–30	12–25 p/bch
Lemon (115 ct slices)	37–40 lb ctn	80	38	3–4
Lemon (115 ct wedges)	37–40 lb ctn	98	38	3–4
Lemon (juiced)	37–40 lb ctn	43		
Lettuce (boston)	eastern ctr 1 1/9 bu wbd	74	20–25	
Lettuce (iceberg)	cs = 24 heads	69–74	40–45	1
Lettuce (romaine)	cs = 24 heads	74	23	
Lime (wedges)	cs = 200 ct	98	40–41	
Lime (juice)	box or ctn	43	40–41	
Mushrooms (large whl)	cs = 10	97	10	25
Nectarines	slanger lug 22 lyr ctn	76	19–22	
Okra	ctn or LA lug loose pk	78–96	18	
Onion (green)	ctns 4 dy bchs	60	15–18	11/bch
Onion (mature)	cs = 5 0 lbs	76–89	50	2 med
Orange (sectioned)	80, 88, 100, 113	56–57	45	
Orange (juice)	50	45		
Parsley	ctn 5 doz	76	21–25	30/bu
Parsnip	1/2 bu or ctns	84–85	25	
Peaches	LA lug 2 layer	76	22–29	
Pears	LA lug	67–78	25	
Peas (green in shell)	bu bskt hmpr or wbd bu	27–38	28–30	
Pepper (green)	ctns from Calif	78–82	30	
Peppers (chili)	LA lug or ctn is pk	16–25		
Peppers (sweet)	ctn	80	28–34	
Pineapple	1 lyr flt 4, 5, 6	48–52	18–20	

Figure A-37 (*continued*)

Produce Prep Yields (*concluded*)

Description	Packing Size	Prep Yield	Avg. Weight per Case	Avg. Counts per Pound
Plums	93–94			
Potatoes	sack or ctn	76–85	100/50	
Potatoes (sweet)	bu bskt or ctn	75–81	50	
Radish (bchd)	ctn or crt 4–5 doz bags	63	30–40	
Radish (topped)	film bag bulk	90	20	
Rhubarb (leaf off)	ctns place pack	86	20	
Rutabagas	film bags Calif	82	25	
Spinach (untrimmed)	bu bskt or crt	72	18–25	
Spinach (cello pkd)	film bag 12/10 dz	92	7.5–8	
Squash (acorn peeled)	66			
Squash (acorn seeded)	88			
Squash (hubbard)	62			
Squash (small)	1–1/9 bu wbd ctn	83	44	
Squash (summer)	bu bskt or ctn	83–98	40–45	
Squash (Zucchini)	83–98			
Strawberries	12/1 pint	84–87	11–14	24
Tangerines	Calif ctn and lug	23–30		
Tangerines	fla 4–5 bu wbd ct	45		
Tomatoes	ctn or wbd ct	86–91	24–33	3
Tomatoes (5X6)	flats ctns 2 lyr	86–91	30–33	3
Tomatoes	LA lug	86–91	30–34	3
Tomatoes (cherry)	12 basket or crt	100	12–17	400 p/cs
Turnips		81		
Watermelon		36–46		

Abbreviations

bchd	=	bunched	oz	=	ounce
bskt	=	basket	pk	=	pack
bu	=	bushel	pkg	=	package
crt	=	crate	pt	=	pint
ctn	=	carton	sk	=	sack
contr	=	container	std	=	standard
hmpr	=	hamper	var	=	various
lb(s)	=	pound(s)	wbd	=	wirebound
lyr	=	layer	wrpd	=	wrapped

Figure A-37 (*concluded*)

Internal Audit Checklist: Minimum Cost Control

REVIEWED and APPROVED: DATE:

	COST CONTROL FUNCTIONS	YES	NO	COMMENTS
1	CONTROL 1 MARKET BASKET SURVEY ANALYSIS. 1. Are market basket analyses on file? For how many months?			
	2. Are copies of related invoices on file? For how many months?			
	3. Is overall weighted average percentage increase in price computed? Over what period of time?			
	4. How many items have been surveyed each month?			
	5. How many of the total items are high-cost entree or specialty items? What percent of total?			
	6. Are the controller, food and beverage director, and chef on the distribution list?			
2	CONTROL 2 WEEKLY AUDIT OF RECEIVING PROCEDURES. 1. Are audits of receiving dock procedures on file? For how many months?			
	2. Are they performed: a. Weekly? b. Biweekly? c. Monthly?			
	3. Is there evidence that discrepancies are reconciled?			
	4. Are the controller, food and beverage director, and chef on the distribution list?			
3	CONTROL 3 MEAT TAG SYSTEM and WEEKLY AUDIT. 1. Is a meat tag system in place? 2. Are there duplicate or triplicate tags?			
	3. Are tags audited and reconciled? a. Weekly? b. Biweekly? c. Monthly?			
	4. Is there evidence that discrepancies are reconciled?			
	5. Are the controller and chef on the distribution list?			

Figure A-38 (*continued*)

Internal Audit Checklist: Minimum Cost Control (*continued*)

	COST CONTROL FUNCTIONS	YES	NO	COMMENTS
4	CONTROL 4 MENU ENTREE ITEMS INVENTORY CONTROL. 1. Are menu entrée items inventory control sheets being used?			
	2. Are results reconciled to sales tallies per a. POS? b. Guest checks?			
	3. Is there evidence that discrepancies are reconciled?			
	4. Are the chef and food and beverage director on the distribution list?			
5	CONTROL 5 BANQUET BEVERAGE CONTROL AUDITS 1. Are banquet beverage control sheets being completed? a. All? b. Using 80/20 methods?			
	2. Sample three for material accuracy of all calculations: Function # of Errors: Banquet # Date + or − 5% --- --- ---			
	3. Are they consolidated at month-end to compute banquet beverage cost percentages?			
	4. Is there evidence that on-site audits of large functions are being done? How often? a. Three times weekly? b. Weekly? c. Biweekly? d. Monthly?			
	5. Are the chef and food and beverage director on the distribution list?			
6	CONTROL 6 BEVERAGE OUTLET AUDITS 1. Are beverage outlet audits being done?			
	2. For which outlets? OUTLET Most Recent Date a. b. c. d. e.			

Figure A-38 (*continued on next page*)

Internal Audit Checklist: Minimum Cost Control (*continued*)

	COST CONTROL FUNCTIONS	YES	NO	COMMENTS
	3. How often are they done? a. Twice weekly? b. Weekly? c. Biweekly? d. Monthly?			
	4. Is there evidence that discrepancies are being reconciled?			
7	CONTROL 7a FOOD POTENTIAL COSTS 1. Are butcher / yield tests on file?			
	2. How many different tests?			
	3. Are they current? What are oldest and most recent dates?			
	4. Are written food recipes on file? Are they current ?/Date a. b. c. d. e.			
	5. Are food potential costs on file? For which outlets / meal periods? Meal Period Date? All? a. b. c. d. e. f.			
	6. Is there a master food item cost list? Has it been updated recently? When?			
	7. Are food recipes costed with current cost data from the master item list?			
	8. How recently? Sample three recipes for consistency. Recipe's Name Costed Correctly Updated a. b. c.			
	9. Do appropriate entree item recipes reflect impact of butcher/yield test factors on their costs? Sample three: Recipes name Cost per recipe Cost per Yield Test a. b. c.			

Figure A-38 (*continued*)

Internal Audit Checklist: Minimum Cost Control (*concluded*)

	COST CONTROL FUNCTIONS	YES	NO	COMMENTS
	10. Have individual food menu item cost calculations been consolidated to compute meal period and overall outlets food cost potential percentages?			
	11. Are overall potential food cost percentages within 1.5 points of actual? Sample last three months: Month Potential Actual a: b: c: d: e:			
	CONTROL 7b. BEVERAGE POTENTIAL COSTS 1. What liquor pour size is being used? 1 1/8 oz?			
	2. Are written beverage recipes on file?			
	3. Do these recipes reflect the liquor pour size *actually* used by all the outlets? Yes No a. _____ _____ b. _____ _____ c. _____ _____			
	4. Is there a master beverage items cost list?			
	5. Is it updated daily by purchasing department? Inventory Item Cost			
	6. Have individual menu item beverage cost calculations been consolidated with the actual cost data for bottle wine sales to compute the overall outlet beverage cost potential percentages?			
	7. Is overall beverage cost potential percentages within 1.0 points of actual? Sample last three months month potential actual a. b. c.			
	8. Are popularity analyses being done?			
	9. Are profitability analyses being done?			
	10. Is profit margin being calculated for each item before and after the cost of preparation labor			
	11. Is there a staffing guide in place?			

Figure A-38 Internal Audit Checklist: Minimum Cost Control (*concluded*)

Self-Inspection Checklist

This is a sample self-inspection checklist. A potential customer, an income auditor, or any person with a vested interest may ask these questions. The cornerstone of any successful business is to anticipate problems and address them. Certainly you can design these questions differently to meet your company's needs. Regular inspection with checklist in hand is the best way to ensure maintenance of your company quality standards. Remember, if there are deficiencies in any of these areas, they may translate to negative responses on your Guest Survey. See Figure A-39 for an example.

Loading Dock

Loading Dock, General			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Is grease container and surrounding area free from spills and particles of food? Comments:	daily
☐	☐	Is trash compactor free of food particles and litter outside dumpster? Comments:	daily
☐	☐	Are dock walls clear of trash or garbage which is due to the dumpster being full? Comments:	daily
☐	☐	Are lights in proper working order? Comments:	daily
☐	☐	Are wooden pallets stacked neatly? Comments:	daily
☐	☐	Is dock floor swept, on both upper and lower levels? Comments:	daily
☐	☐	Are storage facilities for supplies and equipment clean, dry and free of trash, debris, wrappings, and cartons, which might provide nesting for rodents? Comments:	weekly

Figure A-39 Self-Inspection Checklist (*continued*)

Loading Dock, General (*continued*)			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Are supplies stored in a neat and orderly manner? Comments:	as needed
☐	☐	Are supplies stored off the floor and away from walls to permit access for cleaning and to prevent harboring ofrodents and roaches? Comments:	daily
☐	☐	Are containers of pesticides in a marked cabinet and apart from detergents and other chemicals? Comments:	daily

Loading Dock, Safety			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Are emergency exits marked by illuminated signs? Comments:	daily
☐	☐	Is there a first-aid kit present or nearby, with an adequate supply of materials? Comments:	weekly
☐	☐	Have employees been instructed to report all slips, cuts, burns, and falls to their supervisor immediately? Comments:	daily
☐	☐	Is the edge of dock floor clearly marked or painted in a bright, prominent color to prevent falls? Comments:	daily
☐	☐	Are stairs leading down marked with non-slip tape to prevent falls? Comments:	daily

Figure A-39 Self-Inspection Checklist (*continued on next page*)

Loading Dock, Safety (*continued*)			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Is the loading dock bell working and used for all receiving? Comments:	
☐	☐	Are loading-dock areas hazardous in other ways? Suggest safety improvements. Comments:	as needed

General Comments: _____

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Inspected By: _____

Date: _____

Food and Beverage Outlets

Employee Cafeteria, General			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Is there adequate stock of CO_2 gas for soda machines? Comments:	daily
☐	☐	Are hot-line vent hood and walls clean and dust-free? Comments:	weekly
☐	☐	Are ceiling vents in dining area clean and dust-free? Comments:	monthly

Figure A-39 Self-Inspection Checklist (*continued*)

Employee Cafeteria, General (*continued*)			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Are light fixtures, bulbs, tubes, etc., protected with screen guards? Comments:	as needed
☐	☐	Are hot-line counter top and shelves clean and free of dust? Comments:	daily
☐	☐	Are hot-line floor mats clean? Comments:	daily
☐	☐	Is microwave clean and in good working condition? Comments:	daily
☐	☐	Is soda machine in good working condition? Comments:	daily/as needed
☐	☐	Are there adequate supplies of sodas? Comments:	daily
☐	☐	Are cutting boards cleaned and sanitized between uses? Comments:	as needed
☐	☐	Are coolers and freezers equipped with accurate thermometers? Comments:	weekly
☐	☐	Are refrigerators clean and free from mold and objectionable odors? Comments:	daily
☐	☐	Are potentially hazardous foods maintained by refrigerators at temperatures of 45° F or lower? Comments:	daily

Figure A-39 Self-Inspection Checklist (*continued on next page*)

Employee Cafeteria, General (*continued*)			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Are foods stored in a manner to permit First-in, First-out rotation? Comments:	daily
☐	☐	Is salad bar properly used (plug in drain, ice and water in contact with bottom of pans) to maintain 38–40° F product temperature? Comments:	daily
☐	☐	Is ice-machine vent hood free of dust and dirt? Comments:	monthly
☐	☐	Are tea and coffee machines sanitized on a regular basis? Comments:	daily
☐	☐	Are coffee-counter top and shelves clean and free of dust and debris? Comments:	daily
☐	☐	Are food handlers wearing hats, caps or hairnets effective hair restraints? Comments:	daily
☐	☐	Do any food servers have infected burns, cuts, or boils? Comments:	daily
☐	☐	Are food servers issuing proper food portions? Comments:	daily
☐	☐	Is tray-counter underside clean and free of grease? Comments:	weekly

Figure A-39 Self-Inspection Checklist (*continued*)

Employee Cafeteria, General (*continued*)			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Are silverware and serving utensils stored and presented in a manner which both prevents contamination and ensures their being picked up by the handles? Comments:	daily
☐	☐	Are clean and sanitary cloths used for wiping dining-table tops and for no other purpose? Are cloths stored in sanitizing solution between uses? Comments:	daily
☐	☐	Are facilities for supplies and equipment clean, dry and free of trash and debris? Comments:	daily
☐	☐	Is trash container clean outside and inside with liner in place? Is it washed down regularly? Comments:	as needed
☐	☐	Is dining-room hand sink supplied with soap, paper towels, hot and cold running water, and trash can? Comments:	daily
☐	☐	Are drains clean and odor-free? Comments:	bi-monthly
☐	☐	Are all food products maintained at proper temperatures (such as soup, tuna salad, potato salad)? Comments:	daily
☐	☐	Have all employees been instructed on minimum sanitation and food-protection requirements? Comments:	as needed

Figure A-39 Self-Inspection Checklist (*continued on next page*)

Employees Cafeteria, Safety			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Are smoking and non-smoking signs posted in dining area? Comments:	daily
☐	☐	Are emergency-exit doors marked by illuminated signs? Comments:	daily
☐	☐	Is there a fire extinguisher present, properly mounted and in view? Comments:	daily
☐	☐	Do employees know how to use fire extinguisher in case of emergency? Comments:	as needed
☐	☐	Is there an evacuation map posted in case of emergency? Comments:	daily
☐	☐	Is all electrical food-preparation equipment in good repair and performing satisfactorily? Comments:	daily
☐	☐	Do employees know how to use equipment that is required in their positions? Comments:	as needed
☐	☐	Do employees unplug equipment before removing parts or before cleaning? Comments:	daily
☐	☐	In case of choking or heart trouble, has the supervisor been instructed in CPR and first aid? Comments:	as needed

Figure A-39 Self-Inspection Checklist (*continued*)

Employees Cafeteria, Safety (*continued*)			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Is the cafeteria otherwise potentially hazardous? Suggest improvements. Comments:	daily

General Comments: _____

Inspected By: _____

Date: _____

Dish Washing Area			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Are dishes and utensils being pre-scraped and flushed prior to washing? Comments:	daily
☐	☐	Is rinse temperature of at least 170–180° F being maintained for tableware and utensils? Comments:	daily
☐	☐	Are floor and walls free of spills and particles of food? Comments:	daily
☐	☐	Are soaps and detergents stored away from clean china, glass and utensils? Comments:	as needed
☐	☐	Is spray hose free of leaks to prevent back-flow? Comments:	daily

Figure A-39 Self-Inspection Checklist (*continued on next page*)

Dish Washing Area (*continued*)			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Is garbage disposal in satisfactory working order? Comments:	daily
☐	☐	Are undersides of drain board clean and free of food particles? Comments:	weekly
☐	☐	Is trash can odor-free, provided with a liner, and clean? You may wish to use a clear liner to see what has been wasted. Comments:	daily
☐	☐	Are ceiling tiles and vents free of food and dust particles? Comments:	quarterly
☐	☐	Are ceiling lights in proper working condition? Comments:	as needed
☐	☐	Is there sufficient supply of soap, towels, garbage bins and hot and cold running water for hand sink? Comments:	as needed
☐	☐	Are there bins provided for dirty and clean rags? Comments:	daily
☐	☐	Is silver-burnishing machine in proper working condition? Comments:	daily

Figure A-39 Self-Inspection Checklist (*continued*)

Dish Washing Area (*continued*)			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Is silver-sink electric water heater in proper working condition? Comments:	daily
☐	☐	Is silver room clean and organized and equipment off floor? Comments:	daily
☐	☐	Is storage-room mop sink clean, odor-free and organized? Comments:	daily/as needed
☐	☐	Is counter, top and bottom, clear of food and spills? Comments:	daily
☐	☐	Are jets and nozzles cleaned of food particles and de-limed? Comments:	daily/ monthly
☐	☐	Are pots stored upside down and utensil handles stored facing one direction? Comments:	daily
☐	☐	Are glass racks stored at least 6 inches off floor? Comments:	daily
☐	☐	Is hand sink supplied with soap, paper towels, hot and cold running water, and trash can? Comments:	daily/as needed
☐	☐	Is reach-in cooler clean and neat? Comments:	weekly/as needed

Figure A-39 Self-Inspection Checklist (*continued on next page*)

Dish Washing Area (*continued*)			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Are espresso, coffee and tea machines operational and clean? Comments:	daily

General Comments: _____

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Inspected By: _____

Date: _____

Outlets, General			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Is top of ice machine free of objects and door rim free of mold, and is there an ice scoop present? Comments:	daily/ as needed
☐	☐	Is floor underneath ice machine clean? Are vent hood above and side and back walls next to machine also clean? Comments:	daily
☐	☐	Are all trash cans clean inside and out with clear plastic liners? Comments:	daily

Figure A-39 Self-Inspection Checklist (*continued*)

Walk-in Coolers			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Is temperature in cooler at or below 45° F (check outside thermometer and compare with thermometer inside)? Comments:	daily
☐	☐	Is all food being stored off the floor of walk-in cooler? Comments:	daily
☐	☐	Is cooler clean and free from mold and objectionable odors? Comments:	daily
☐	☐	Is proper cleaning and maintenance of walls and floors being conducted? Comments:	daily/as needed
☐	☐	Are foods stored in a manner to permit "First-in, First-out" rotation? Comments:	daily
☐	☐	Are any spoiled foods present? Is the "spoilage sheet" being used for documentation? Comments:	daily
☐	☐	Are raw foods stored separately from cooked foods? Comments:	daily
☐	☐	Are dairy products stored separately from strong-odor foods? Comments:	daily
☐	☐	Are cooked foods or other products removed from original containers, stored in clean, sanitized, covered containers and identified? Comments:	daily

Figure A-39 Self-Inspection Checklist (*continued on next page*)

Walk-in Coolers (*continued*)			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Is there sufficient space in the cooler to permit good air circulation around the stored food? Comments:	daily

General Comments: _____

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Inspected By: _____

Date: _____

Bar Area			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Are liquor dispensers free of leaks and dust? Comments:	daily
☐	☐	Are floor lights and ceiling tile OK? Comments:	daily
☐	☐	Is storage of liquor bottles proper? Are automatic pours free of dust? Comments:	daily
☐	☐	Are cooler and freezer free of broken glass and spills? Comments:	daily

Figure A-39 Self-Inspection Checklist (*continued*)

Bar Area (*continued*)			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Are all glasses stored on bar mats, rim down? Are insides of nozzles free of mold? Comments:	daily
☐	☐	Is underneath the counter free of spills and debris? Comments:	daily
☐	☐	Are drains clean and sanitized? Comments:	daily
☐	☐	Are floor and mats clean? Comments:	daily
☐	☐	Is bar area free of boxes and other litter? Comments:	daily

General Comments: _____

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_____

Inspected By: _____

Date: _____

Figure A-39 Self-Inspection Checklist (*continued on next page*)

All Restaurants, Safety			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Are smoking and non-smoking sections provided in dining area? Comments:	daily
☐	☐	Is there a sign posted restricting smoking in the back –of the house? Comments:	daily
☐	☐	Are there extinguishers present, properly mounted, and in view? Comments:	daily
☐	☐	Is the manager provided with a high-power flashlight in case of blackout? Comments:	daily
☐	☐	Are routes to exits, and the exits themselves, clearly marked? Comments:	daily
☐	☐	Is there a well-stocked first-aid kit nearby? Comments:	daily
☐	☐	Are employees instructed to report all slips, cuts, burns and falls immediately? Comments:	daily
☐	☐	Are employees trained in safe use of cleaning compounds? Comments:	daily
☐	☐	Are hand trucks, carts, and dollies used for receiving food and supplies in good repair? Comments:	daily

Figure A-39 Self-Inspection Checklist (*continued*)

All Restaurants, Safety (*continued*)			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Are racks, hooks, and gloves provided so that dishwashers do not have to put their hands into sanitizing baths of hot water or chemicals? Comments:	daily
☐	☐	Is all food-preparation equipment in good repair and performing satisfactorily? Comments:	daily
☐	☐	Do employees know how to use equipment (steamers, dish machine, broiler, ovens, fryers) that their position requires them to use? Comments:	daily
☐	☐	Are the kitchen area and dining room potentially hazardous? Suggest improvements. Comments:	daily
☐	☐	Has dining-room manager received training in CPR and first aid? Does he or she know what to do if a guest is choking? Comments:	daily

General Comments: _____

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Inspected By: _____

Date: _____

Figure A-39 Self-Inspection Checklist (*continued on next page*)

Room Service/In-Room Dining, General			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Is food stored properly? Comments:	daily
☐	☐	Are silver urn and utensils clean and polished? Comments:	weekly/as needed
☐	☐	Is flatware on tables clean and polished? Comments:	quarterly
☐	☐	Is linen stored properly on shelves? Comments:	daily
☐	☐	Are portable warmers clean? Comments:	monthly
☐	☐	Are table legs and wheels clean? Comments:	weekly/as needed
☐	☐	Are condiments clean and arranged for "first-in, first-out" rotation? Comments:	daily
☐	☐	Are food-storage shelves clean and free of dust and debris? Comments:	weekly
☐	☐	Is the floor clean and free from spilled food? Comments:	bi-weekly
☐	☐	Is trash receptacle cleaned and lined? Comments:	weekly

Figure A-39 Self-Inspection Checklist (*continued*)

Room Service/In-Room Dining, General (*continued*)			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Is bun warmer clean? Comments:	daily
☐	☐	Is counter, top and bottom, clean and free of grease? Comments:	daily
☐	☐	Is coffee machine cleaned and sanitized regularly? Comments:	bi-weekly
☐	☐	Is water-glass storage area (wall, floor) clean? Comments:	weekly
☐	☐	Is refrigerator clean inside and outside? Comments:	weekly
☐	☐	Are products being stored and wrapped properly? Comments:	daily
☐	☐	Is hand sink supplied with soap, paper towels, hot and cold running water, and trash can? Comments:	daily
☐	☐	Are Queen Mary and Cres-Cors removed and cleaned periodically? Comments:	monthly
☐	☐	Is storage closet clean and organized? Comments:	weekly
☐	☐	Is there a bucket for soiled rags and sanitizer present? Comments:	daily

Figure A-39 Self-Inspection Checklist (*continued on next page*)

Room Service/In-Room Dining, General (*continued*)			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Is there a no-smoking sign posted in plain view? Comments:	daily
☐	☐	Is there a well-stocked first-aid kit nearby? Comments:	daily
☐	☐	Are all staff instructed to report all cuts, slips, burns and falls immediately? Comments:	daily
☐	☐	Are all electrical boxes accessible? Comments:	daily
☐	☐	Is there an evacuation map posted next to the elevator? Comments:	daily
☐	☐	Are routes to exits and the exits themselves clearly marked? Comments:	daily
☐	☐	Is there an extinguisher present, properly mounted and in view? Comments:	daily
☐	☐	Are flammable chemicals such as Sternos stored in a safe location away from other equipment? Comments:	daily
☐	☐	Are all flammable items kept clear of heating chemicals in food warmer? Comments:	daily

Figure A-39 Self-Inspection Checklist (*continued*)

Room Service/In-Room Dining, General (*continued*)			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Do staff members know the hazards associated with their duties and related equipment? Comments:	daily
☐	☐	Is all food-preparation equipment in good repair and performing satisfactorily? Comments:	daily
☐	☐	Has supervisor received training in CPR, first aid, and the Heimlich maneuver? Comments:	as needed

General Comments: _____

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Inspected By: _____

Date: _____

Main Kitchen

Kitchen General Area			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Is top of ice machine free of objects and door rim free of mold, and is there an ice scoop present? Comments:	daily
☐	☐	Is floor underneath ice machine clean? Are vent hood and side and back walls next to machine also clean? Comments:	daily

Figure A-39 Self-Inspection Checklist (*continued on next page*)

Kitchen General Area (*continued*)			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Is time clock accessible? Comments:	daily
☐	☐	Are all trash cans clean inside and outside with clear plastic liners? Comments:	daily
☐	☐	Are all china and silverware shelves and area beneath shelves clean, organized and sanitary? Comments:	daily
☐	☐	Are walls next to dish machine area clean? Comments:	monthly
☐	☐	Is stained china being checked, removed from circulation and put in a chemical solution? Comments:	daily
☐	☐	Is spray hose free of leaks to prevent back-flow? Comments:	daily
☐	☐	Is glass-rack shelf clean and neat? Comments:	daily
☐	☐	Is silverware placed in bus tub with foil and soil loosening chemical solution? Comments:	daily
☐	☐	Are all chemicals stored in one central location away from clean china, glass and silverware? Comments:	daily

Figure A-39 Self-Inspection Checklist (*continued*)

Kitchen General Area (*continued*)			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Is the rinse temperature between 180 and190° F? Comments:	daily
☐	☐	Is the wash water at the proper temperature of 150–160° F? Comments:	daily
☐	☐	Are jets and nozzles cleaned of food particles and other obstructions and contaminants? Comments:	twice daily
☐	☐	Are dish dollies clean and soil-free? Comments:	monthly
☐	☐	Is dish machine free of lime and crust? Comments:	monthly
☐	☐	Are all kitchen staff wearing clean uniforms and effective hair restraints? Comments:	daily
☐	☐	Is hand sink supplied with soap, paper towels, hot and cold running water and trash can? Comments:	daily
☐	☐	Is the floor clean beneath glass racks? Are glass racks stored at least 6 inches off the floor? Comments:	daily

Figure A-39 Self-Inspection Checklist (*continued on next page*)

Kitchen General Area (*continued*)
General Comments: _____
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Inspected By: _____
Date: _____

Server Station Area			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Is espresso machine in proper working condition? Comments:	daily
☐	☐	Is toaster operating properly? Comments:	daily
☐	☐	Is milk machine clean, odorless, and free of ice buildup? Is there a thermometer inside? Compare with unit thermometer. Comments:	daily
☐	☐	Is hand sink clean and supplied with soap, towels, and hot and cold running water? Comments:	daily
☐	☐	Are wall and ceiling above counter clean and stain-free? Comments:	daily

Figure A-39 Self-Inspection Checklist (*continued*)

Server Station Area (*continued*)			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Is storage of supplies clean, organized, and 6 inches above floor? Comments:	daily
☐	☐	Is ice-cream cooler clean and equipped with a thermometer? Comments:	daily

General Comments: _____

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Inspected By: _____

Date: _____

Cold Line			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Is reach-in cooler clean and free from mold and debris? Comments:	daily
☐	☐	Are mats clean and floor swept twice daily? Comments:	daily
☐	☐	Are bottoms of refrigerators clean and free from mold and objectionable odors? Comments:	daily
☐	☐	Are refrigerators maintaining potentially hazardous foods at temperatures of 45° F or lower? Comments:	daily

Figure A-39 Self-Inspection Checklist (*continued on next page*)

Cold Line (*continued*)			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Are refrigerators equipped with accurate thermometers? Comments:	daily
☐	☐	Are refrigerator shelves showing signs of rust? Comments:	weekly
☐	☐	Are foods stored in a manner to permit "first in, first" out rotation? Comments:	daily
☐	☐	Check the temperatures of at least three foods. Comments:	daily
☐	☐	Are display window and shelf clean and dust-free? Comments:	daily
☐	☐	Is salad bar properly maintaining 38–40° F product temperature? Comments:	daily
☐	☐	Are food handlers wearing hats or other effective hair restraints? Comments:	daily
☐	☐	Is hand sink supplied with soap, paper towels, hot and cold running water, and trash can? Comments:	daily
☐	☐	Is salad bar supplied with protective shields? Comments:	daily
☐	☐	Is ice-cream freezer clean and odor-free? Comments:	monthly

Figure A-39 Self-Inspection Checklist (*continued*)

Cold Line (*continued*)			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Is wall clean and wiped down? Comments:	monthly
☐	☐	Is yogurt machine clean and wiped down with sanitizing solution? Comments:	daily
☐	☐	Is counter clean and wiped down with sanitizing solution? Comments:	daily
☐	☐	Are bottom shelves free of food and debris? Comments:	daily
☐	☐	Has dining-room manager been certified through a sanitation food-service course? Comments:	as needed

General Comments: _____

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Inspected By: _____

Date: _____

Figure A-39 Self-Inspection Checklist (*continued on next page*)

Pastry Kitchen

Pastry Kitchen, General			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Are clean pots and pans stored upside down? Comments:	daily
☐	☐	Are floors underneath shelves clean? Comments:	daily
☐	☐	Is ice-cream freezer clean and equipped with thermometer? Comments:	weekly
☐	☐	Are all products wrapped? Comments:	daily
☐	☐	Is floor drain next to freezer clean? Comments:	bi-monthly
☐	☐	Is floor clean? Comments:	daily
☐	☐	Is dough machine clean? Comments:	daily
☐	☐	Is roll clean? Comments:	daily
☐	☐	Is sorbet machine clean? Comments:	daily

Figure A-39 Self-Inspection Checklist (*continued*)

Pastry Kitchen, General (*continued*)			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Is table mixer clean? Comments:	daily
☐	☐	Is cookie Cres-Cor clean? Comments:	monthly
☐	☐	Is floor mixer clean? Comments:	daily
☐	☐	Is wooden countertop clean and sanitized? Comments:	daily
☐	☐	Are stainless tables, top and underside, clean and sanitized? Comments:	daily
☐	☐	Is floor clean and free of food particles? Comments:	daily
☐	☐	Is reach-in cooler equipped with thermometer? Compare with thermometer on outside of unit. Comments:	daily
☐	☐	Is reach-in cooler free from mold and objectionable odors? Comments:	daily
☐	☐	Is food wrapped and stored properly? Comments:	daily
☐	☐	Is marble top clean and sanitized? Comments:	daily

Figure A-39 Self-Inspection Checklist (*continued on next page*)

Pastry Kitchen, General (*continued*)			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Is food stored underneath counter wrapped and labeled? Comments:	daily
☐	☐	Are walls clean and free of dust? Comments:	monthly
☐	☐	Is grill top clean? Comments:	daily
☐	☐	Is large kettle clean? Comments:	daily
☐	☐	Is wall behind cooking units clean and free of odor? Comments:	daily

Pastry Kitchen, Cooler			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Is cooker working properly and maintaining a temperature of between 38–45° F?	daily
		Comments:	
☐	☐	Are walls clean?	monthly
		Comments:	
☐	☐	Are lights in working order?	daily
		Comments:	
☐	☐	Are Cres-Cors being removed periodically for cleaning?	monthly
		Comments:	
☐	☐	Is food wrapped or covered properly?	daily
		Comments:	

Figure A-39 Self-Inspection Checklist (*continued*)

Pastry Kitchen, Cooler (*continued*)			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Is freezer working properly and maintaining a temperature of 0° F or lower? Comments:	daily
☐	☐	Are walls clean? Comments:	monthly
☐	☐	Are lights in working order? Comments:	daily
☐	☐	Are carts being removed periodically for cleaning? Comments:	monthly
☐	☐	Is food wrapped or covered properly? Comments:	daily
☐	☐	Is floor clean? Comments:	daily

Pastry Kitchen, Safety			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Is there a fire extinguisher present, properly mounted, and in clear view? Comments:	daily
☐	☐	Is there a well-stocked first-aid kit nearby? Comments:	daily
☐	☐	Are all staff instructed to report all cuts, slips burns, and falls to Security immediately? Comments:	daily
☐	☐	Is all food-preparation equipment in good repair and performing satisfactorily? Comments:	daily

Figure A-39 Self-Inspection Checklist (*continued on next page*)

Pastry Kitchen, Safety (*continued*)			
Yes	**No**	**Inspected**	**Frequency**
☐	☐	Do associates know how to use equipment which their position requires them to use? Comments:	daily
☐	☐	Do employees unplug equipment before removing or before cleaning? Comments:	daily
☐	☐	Are spills and debris removed from the floor immediately? Comments:	daily
☐	☐	Are all electrical boxes clear of carts and debris? Comments:	daily
☐	☐	Has chef or supervisor received training in CPR and first aid? Comments:	daily

General Comments: _____

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Inspected By: _____

Date: _____

Figure A-39 Self-Inspection Checklist (*concluded*)

Database Information and Computer Systems

After reading this section of the appendix, you should be able to:

- Make decisions concerning the purchase or upgrading of POS, purchasing, inventory, and menu analysis systems
- Evaluate computer system contracts and lease agreements
- Maintain database information and assign security access to users
- Develop computer systems contingency plans

Overview

A wide array of increasingly important issues pertaining to the functions and operations of computerized information systems are covered in this chapter. Issues covered include selection and procurement options, maintenance and security, and especially contingency planning for disaster recovery.

Buying or Upgrading of Point-of-Sales and Purchasing Systems

Considering upgrading or purchasing a new computer system often means that your current system is inadequate. Downtime may be affecting guest service. Perhaps the system is too expensive to maintain. The current system may negatively affect employee morale and productivity, often increasing overtime costs. Any of a number of problems can affect the decision to purchase or to upgrade. It is important not to compromise on an inadequate system that does not meet all of your needs. It may cost you more money in the long run if you settle for an inadequate system.

If your role is to assist your company with respect to the functionality of computer systems, first ascertain the transaction functionality of the current system. Conduct a thorough research of the current system by asking the system users to list in writing the advantages and disadvantages that they encounter in the current system. Their answers become the benchmark for new systems evaluation and testing. This survey will aid in the selection of a computer system that confronts all the problems addressed by the staff.

Contract and Lease Agreements

Many businesses prefer contracts and leasing agreements for their computer systems, often to avoid the initial capital outlay for a new system or to avoid inevitable obsolescence. In appraising the merits of the various contracts and lease agreements available, evaluate the following:

- Which equipment is offered through leasing agreements, and with which companies?
- Is the equipment already part of the company's inventory, and, if so, at what location?
- Is equipment properly tagged for identification?
- Is the working condition of the equipment acceptable?

- Review the maintenance agreements of the equipment, if any, to establish dates, clauses, and maintenance schedules.
- Establish the last date the equipment was inventoried.
- Check the equipment against fixed asset accounts reports.
- Consider other companies before signing an agreement.
- Establish written contingency or disaster recovery plans.

Reviewing the reliability and integrity of lease and contract documents could have a significant impact on control procedures. Furthermore, this review should include an inventory listing of all equipment with date of purchase or lease, date received, cost, location, and working condition.

Database Maintenance and Security Access

Though often ignored, questions of database maintenance have the potential to create serious and long-lasting problems for the financial and operational reporting of any company. At times, employees have greater levels of computer access than necessary to perform their duties. Physical access to the computer room is often unrestricted. Employees responsible for processing invoices into the purchasing database need to be trained on the physical layout of the storeroom and given a working knowledge of the products. Item classification as food versus beverage, for example, becomes vital for true cost reporting. Item descriptions must be verified for consistency, absence of duplication, and easy referencing.

These kinds of deficiencies often plague a system endlessly. It may be necessary to start from scratch in setting your system to higher standards. On a base level, it is crucial to establish a checks and balances system with more than one person verifying data. One person, for example, will enter the invoices into the purchasing system, and another person will post the invoice after verifying that the items have been entered properly with the correct quantity, price, and description. This checks-and-balances system is also extended to POS price look-up numbers (PLUs). If the general ledger classification of an item is as a beverage, then the invoice for that item should be classified into the beverage group for inventory extension and costing.

Computer Contingency Plan

Every company's financial health is dependent upon its computer data-processing systems. In varying degrees, these systems are vulnerable to partial or total violation and breakdown. Whether it is from a disgruntled employee, a fire, malicious outsiders, or operator error, company management must be aware of the possibility of a system loss.

Many businesses are unprepared for any computer system-related disaster; often companies have no contingency planning whatsoever. Companies who do have recovery plans often fall short in addressing the full range of possible disasters. Not all disaster recovery plans are inadequate, but for the most part, the issues and questions raised here do not fall into the standard disaster recovery risk scenarios, so they are often not planned upon. During an actual disaster is an inopportune time to encounter an overlooked issue. Some of the issues are not significant in themselves, but when merged with the problems arising from the process of disaster recovery, these issues can cause confusion and irritation to both the organization's staff and its executives. Most of these overlooked components can be categorized into two general groups: people issues and communication issues.

As part of any adequate disaster recovery plan, certain key staff members need to be available to enact the recovery plan. The first step in establishing a plan, therefore, is to determine which staff members need to be involved to recover individual systems. This recovery team will normally be composed of the information services staff, and, according to the system being addressed, the appropriate department head.

People Issues

During a disaster, whether the entire organization or just the information services department staff face relocation, people issues arise that ought to be addressed in a disaster recovery plan. These issues center on the ability of employees to actually get work done, and involve mainly the ability of the recovery team or the user departments to access computer systems. The information systems administrator needs to plan for access to current records in order to reconstruct damaged data. In addition, those who will be involved in recovery must be available for that task. A step-by-step recovery plan, delineating responsibilities, tasks, and requirements, must be in place and understood before disaster occurs. Running through the plan before a disaster will embed these needs and responsibilities in the minds of all concerned.

Communications Issues

For a recovery process to be successful, people must be able to perform their usual job responsibilities. For the user, business recovery requires communication with the recovery team and requires that the following situations occur:

- reestablishment of the information services department systems and telecommunications capabilities
- reestablishment of customer service applications
- reestablishment of the ability to perform the order entry, purchasing, payroll, general ledger, and/or other essential information processing applications
- assurance that logged transactions are carried forward to the point of the disaster or processing failure
- balancing to such known values of total transactions
- closing the applications safely
- reopening for a new business day (this step is the true test of a disaster recovery plan).

If your hotel or business tests the disaster plan, at least one test should include end-user participation. An end user is one whose work relies regularly on the information systems. In addition, selected customers should be included in a test to determine whether the hotel can actually conduct business in a normal fashion after a catastrophe. Management, end users, and customers get a better feeling about the continuity of business when they are involved at this level of recovery testing. Figure A-40 profiles communications needs and a process for reestablishing readiness.

Essential Service or Application	Covered Section in Your Manual	Affected Areas	Contingency Coordinator
Accounts Payable	*Example:* Enter the page in your manual for accounts payable	Accounting Cost Control Purchasing System	Cost Controller Purchasing Manager Assistant Controller
Inventory, Purchasing, and Menu Analysis		Accounts Payable General Ledger Purchasing Storeroom Cost Control	Assistant Controller Assistant Controller Dir. of Purchasing Cost Controller
Payroll System		All Departments	Department Heads
POS/Posting Systems		Restaurants Front Desk	Cost Controller Front Desk Manager Restaurant Manager

Figure A-40

Several hours of downtime for the online reservations, POS, front office, and financial records systems, to mention but a few, would constitute a disaster. Identify these critical areas of vulnerability in order to focus recovery planning on the areas most affected by actual disaster. View the information that you accumulate here as a resource that merits protection. Planning for disaster recovery is valuable because it provides an opportunity for the following:

- improved protection of your organization's assets
- reduced insurance costs
- enhanced site and information security
- improved information management

The extent of resources allocated to the development of a disaster recovery plan should be directly related to the value that management places on the information the plan is intended to protect. No organization is perfectly prepared for disaster and recovery preparedness, yet it is prudent to acknowledge the inevitability of disaster. Business must include the unthinkable as an integral part of management strategic planning.

Identify critical areas of vulnerability. Identify critical operations that could be affected by a disaster in order to improve the focus of the planning and the actual disaster recovery efforts. For example, for the safety of financial records, backup disks should be stored in a fireproof area outside the computer room. There should be no water sprinkler device in the computer room. All workstations or terminals should have some type of anti-virus program to detect and prevent contamination. And there should be a blueprint of all the cable lines connecting the computer systems.

Identify and classify potential types of disaster events. For each critical area of operational vulnerability, determine potential crises due to technological breakdown, confrontational issues, malevolent behavior, or management failure. Each type of crisis should be classified according to its potential severity, and resources allocated per the classification. Each operational area will have unique concerns. Consider asking staff opinion on what functions are critical, and how to maintain them in the event of a crisis. If you have never had disaster recovery plans before, chances are your staff will know from experience what is most crucial and what avenues of backup already exist. They probably developed current contingency measures.

Use disaster recovery technologies for everyday situations as a way to maintain the reliability of a disaster recovery plan. To do this, review your disaster contingency manual, and utilize it in every unforeseen situation relating to computer systems. Establishing open lines of communication through these recovery channels will assist when an actual disaster does occur. This will also help disaster recovery team members to maintain confidence in the plan.

Determine the critical timeliness associated with the effort to recover from a disaster. Set standards: When must the computer system or information processing application be sufficiently operational? Which operations are critical to return the organization to business? Which functions can be superseded in initial recovery attempts, and which will cost the company less money in the waiting?

Answer each question in the following impact analysis questionnaire by department; identify the risks of loss and clarify exposures resulting from a computer or other disaster in dollars and cents terms. Your management team should review the approach and results. An impact analysis is essential for numerous reasons. By definition, an impact analysis identifies the nature of an organization's business in detail. How and what does the business use to accomplish specific operational objectives? Which computer resources and functions are critical to the achievement of those objectives? What loss can the organization expect to incur from such disasters?

Performing a Risk Analysis

- Review the existing data center environment.
- Identify the critical information processing applications.

- Estimate the value of the assets used by these applications that must be protected.
- Quantify the estimated loss associated with the occurrence of a disaster in dollar terms.
- Use the questionnaire below to assess your business's vulnerability and to estimate resources necessary for disaster recovery.

Impact Analysis Questionnaire

Impact analysis consist of the user department and department manager describing and documenting the effects of system failure as it relates to applications, financial, controls, operation, and post-recovery issues.

Application Systems

1. List the application processing systems used in the department, including any outside computer services.
2. Write a brief description of each application, including its general purpose, the number of users, and the type of functions performed by the application (e.g., data entry, inquiry, and report generation).
3. For each type of function performed, specify the volume of the transactions processed and their dollar value for the following time periods: 8 hours, 24 hours, 48 hours, 72 hours, 5 days, 10 days, 30 days.
4. Describe the frequency of this application's use (e.g., daily, weekly, or monthly) and the variations in that use, including peak loads.
5. Provide detailed information about the application's regular hours of operation and any variations in that operation (e.g., those caused by seasonal conditions such as the year's end).
6. Provide detailed information on any reports or transaction listing generated for each application.
7. If the application passes information from one system to another, provide detailed information on the following:
   - the name of the system and/or any outside computer service
   - the types of transactions
   - the volume of transactions
   - the dollar value of transactions
   - how these transactions are linked to other systems

Financial Impact

1. Describe in dollar terms the likely impact of a computer disaster (e.g., the unavailability of each application system) on the regular operations of the department in terms of each of the following: 12 hours, 24 hours, 48 hours, 72 hours, 5 days, 10 days, and 30 days.
2. Describe the contractual obligations that would be affected by a computer disaster and qualify the exposure in dollars, including such issues as contracts with clients and responsibilities to customers.
3. Describe how a computer disaster within the department would affect your company image in the marketplace and the general community.

Management Information and Control

1. List the management controls that would be affected by a disaster that has made the computer unavailable to the department.
2. List the department's daily operational activities or functions that would be affected by a computer disaster. (Substantiate this answer with examples).
3. List the management reports that would be affected by the unavailability of the computer after the occurrence of a disaster.
4. Describe the impact of a computer disaster on management decision-making in the department.

Operational Impact

1. Detail the impact of a computer disaster on the level of service provided to other departments within your company or to its clients and guests.
2. Describe the impact of a computer disaster on the department's management reporting functions.
3. Estimate the department's productivity loss that would be caused by a computer disaster in business days and in dollars: 12 hours, 24 hours, 48 hours, 72 hours, 5 days, 10 days, and 30 days.
4. Estimate the number of hours, days, or weeks that could pass before the unavailability of the application system following a computer disaster would affect the regular operation of the department.

Post-recovery

1. Provide detailed information on how the backlog of data that would accrue during a period of downtime would be collected and processed following a disaster, and by whom, and at what cost.
2. Estimate the impact on the ongoing operations of the department of not recovering the backlog of information following a computer disaster.
3. Estimate the minimum processing period needed to support the department's operations if certain information processing applications were available for a minimum number of hours per day, week, or month during the disaster recovery period.

Summary

As described in the various chapters, computers can provide valuable assistance in performing many calculations in a timely fashion. The expense and quick obsolescence of computers make the process of purchasing and upgrading computers critical. After needs are determined, a decision must be made to purchase or lease a system.

Maintenance and security of databases are also critical. Access to the system should be restricted to only people with need and authorization. Checks and balances should be implemented. Likewise, a contingency plan needs to be designed in case of system failure or compromise. This should specify, step by step, processes and responsibilities for system recovery, as well as how business will be conducted in the interim. As with any emergency planning, the plan should be tested on a regular basis prior to actual need. While this may be costly, the cost incurred by failure to develop contingency and recovery plans may be even more expensive. Determine the potential cost of system failure and create a cost-effective alternative. By having users complete a questionnaire similar to the one described in the chapter, costs and cost-effective solutions may be analyzed.

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
System Design								
Purchasing, Inventory, Recipe modules are integrated								
Purchasing, Inventory, Recipe modules can operate independently								
User controls and defines:								
System set-up tables for products, product groups, storerooms, departments, etc.								
System control tables for record retention, processing date, batch reports, etc.								
Data entry can be performed from various locations (storerooms, outlets)								
Item number and quantity only data required for defined item entries								
Help screens, data search and inquiry functions are accessible form data entry screens								
Automatic updating of inventory and recipe item costs as items are purchased								
Ability to reference capital project or work order numbers								
Tracking by lot or serial number supported								
Report writer available								
Inventory costing methods:								
First-In, First-Out								

Figure A-41 Computer Systems Surveys (*continued on next page*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
Weighted Average								
Last-In, First-Out								
Last Price Paid								
Audit Trail								
Complete audit trail of inventory and purchasing transactions								
Online inquiry of transactions by item, department, and document type								
Transaction records contain user name, workstation, date, and time of inquiry								
Interfaces								
Vendor invoices to accounts payable								
Inventory to general ledger asset control accounts								
Purchasing and inventory to job costing/project tracking system								
Point of Sale system sales data to Menu item module								
Point of Sale System sales data interfaced to produce outlet Menu Item Control variances								
Bar code reader/printer systems for ordering, receiving, issuing inventory								
Purchasing to and from vendor systems via electronic data transfer (e.g. Kraft-Link)								

Figure A-41 Computer Systems Surveys (*continued*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
Purchasing to vendors via automatic facsimile								
Recipe/menu items and cost updates to MIRACLE Catering Book								
Interface from MIRACLE catering orders to determine purchasing quantity requirements								
System Security								
Vendor purchase requisition dollar limits defined per user								
Hotel requisitions dollar limits defined per user								
Purchase order approval dollar limits defined per buyer								
Group user profiles for categories of users								
Users see all menus								
Users see only the menus to which they are authorized to access								
Level of security determined by:								
Function (Inventory, Purchasing, or Menu Analysis)								
Product Groups								
Other (please specify)____USER NAME/PROFILE_____								
Other (please specify)____SYSTEM ADMINISTRATOR___								

Figure A-41 Computer Systems Surveys (*continued on next page*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
Users defined by department and $ amount for automatic approval notification of documents								
Daily System Maintenance								
Automatic purge (based on user definition) of:								
Closed or deleted purchase / requisition records								
Transaction records and Audit Log **								
Incomplete purchase / requisition records								
Automatic generation and printing of:								
Purchase requisitions using reorder / par quantities								
Re-order reports								
Automatic print of scheduled reports								
Perform month end updates and report functions								
Automatic data back-up								
Product Description Parameters								
Product name screen display:								
30 characters								
Other (please specify)____64 Characters____								
Purchase order product description:								
1 line, 60 characters								
Other (please specify)____30–45 characters__								

Figure A-41 Computer Systems Surveys (*continued*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
Other (please specify)____64 Characters____								
Specification sheet product description:								
3 lines, 60 characters each								
Pre-formatted industry standard specification screens for product type								
1 line, 40 characters								
Purchase and Inventory Stock Control Factors: Product Description								
User defined units of measure and ratios for purchasing, inventory, and recipes								
Allowable percent variances from ordering price to invoiced price								
Allowable percent quantity variances from amounts ordered to received								
Preferred vendor								
Assigned vendor								
Low bid vendor								
Manufacturer name or code								
Bar code number								
Default tax code								
Alternate product number								
Last purchase vendor, date, and price—updated automatically								

Figure A-41 Computer Systems Surveys (*continued on next page*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
Inventory usage history								
Unlimited stock location definitions								
User defined:								
Product par quantity								
Product order points								
Product safety stock quantity								
System generated product order points based on historical usage								
Department and primary physical stock locations defined for each product								
User defined physical inventory period								
Order review period factors are user defined								
Products can be flagged for automatic vendor purchase requisition								
Products can be flagged for automatic departmental stock transfer								
Storeroom shelf or bin locations specified								
Product Inquiry and Catalog Functions								
Inquiry by:								
Product number								
Product name								
Storeroom reference								

Figure A-41 Computer Systems Surveys (*continued*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
Product group								
Vendor (distributor)								
Manufacturer name								
Product catalogs listed:								
Numerically								
Alphabetically by name								
Storeroom reference								
Product group								
Vendor (distributor)								
Manufacturer name								
Support Issues								
24 hour, 7 days a week support system								
Dial-up accessibility for trouble shooting and program download								
TOTAL RESPONSES:								
PERCENTAGE OF RESPONSES:								
General Vendor Information								
System support available 5 days per week								
Telephone support available								
Vendor completed a detailed system review in seattle								

Figure A-41 Computer Systems Surveys (*continued on next page*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
Age of the software package								
Last update of software								
Number of current software systems installed								
The vendor maintains international installation and support services								
How long has the company been in business?								
System Cost Information								
Vendor-discountable software (5–10 Users)								
Other software requirements								
SUBTOTAL								
DISCOUNT RATE								
DISCOUNT VALUE								
TOTAL SOFTWARE								
Installation and Training								
Installation and Training: Number of Man Days								
TOTAL SYSTEM INVESTMENT								
AVERAGE SYSTEM PRICING								
Percent Variance to Average System Pricing								
Annual System Maintenance								

Figure A-41 Computer Systems Surveys (*continued*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
Storeroom Inventory Control								
Food and beverage items inventory control								
Non-food and beverage items inventory control								
Item quantity updates and adjustments are controlled by:								
Centralized inventory control department or person								
Issuing storeroom								
Outlet cost transfers automatically updated by issues from storeroom inventory								
Inventory adjustments require an explanation and the appropriate security level								
Inventory Management								
System automatically computes:								
Reorder points based upon user definition								
Safety stock based upon user definition								
Economic order quantities based on usage histories								
Order review reports generated daily based upon item specification								
Stock order review worksheets generated on demand by product group								
Zero balance inventory reports produced daily								

Figure A-41 Computer Systems Surveys (*continued on next page*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
Zero balance inventory reports produced on demand								
Automatic purchase requisitions generated for selected products that have reached order point								
Inventory Requisitions								
Issues from storerooms to cost centers								
Automatic back order requisitions for stock-outs								
Transfers between departments								
Returns to stock								
Requisitions entered interactively from cost centers								
Requisitions printed in the issuing storeroom stock location sequence for use as picking lists								
Frequently used products defined on a profile requisition for:								
Recall for requisition generation								
Automatic generation by day of week or specific date								
System generated Outlet Liquor Bottle Stickers per daily requisitions								
Physical Inventory								
Inventory periods controlled / defined by individual storeroom								

Figure A-41 Computer Systems Surveys (*continued*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
May be taken any number of time within an inventory period								
Items may be selected for counting by:								
Product class								
Stock location								
Item number								
Alphabetical listing								
Items that are selected for counting are "frozen" to prevent updates								
Count sheets are printed "blind" without perpetual or on-hand quantities noted								
Count sheets are printed with perpetual or on hand quantities noted								
Variance between physical and computed counts:								
Listed in descending order								
Listed in descending order with user defined filter								
Physical inventories by pen based system								
Physical inventories by bar code scanner								
Inventory Inquiry								
Display of individual requisitions								
Open line item inquiry (ability to view all period activity for item or product)								

Figure A-41 Computer Systems Surveys (*continued on next page*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
Requisition item summary display by department and item								
Current period and year to date balance display by item								
Inventory transactions displayed by:								
Product								
Department								
Document type (requisition, purchase order, purchase request)								
Inventory Report Options								
Inventory requisition transaction summary by product								
Inventory requisition summary by product groups								
MTD summary of requisitions by product groups								
Inventory items with zero balance								
Item usage analysis - flexible time frames, prior year comparison								
Inventory on-hand balance adjustments								
Inventory balance report								
Physical inventory variance report								
General Ledger distribution report								
Inventory stock status review worksheet								

Figure A-41 Computer Systems Surveys (*continued*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
Merchandise received								
Re-Order report								
Inventory summary by location								
Inventory variance by location								
Inventory usage by location								
Slow moving / dead stock products								
Daily Record of Purchases and Issues (And B Forms) with MTD figures								
Month end summary: Daily Record of Purchases and Issues with YTD figures								
TOTAL RESPONSES								
PERCENTAGE RESPONSE BY CATEGORY								

Figure A-41 Computer Systems Surveys (*continued on next page*)

Hotel and Restaurant

INVENTORY FEATURES: Inventory, Purchasing, Recipe, Menu Analysis System

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
Base Recipe Items (Items that are not directly priced or sold)								
Non-food and beverage items may be defined in recipes								
Created using any inventory stock, direct purchase, and other recipe items as ingredients								
Base recipe definition includes:								
Recipe name and category								
Number of servings								
Listing of ingredients								
Preparation method								
Cost updated automatically when recipe items are purchased								
May be linked to multiple outlets or storerooms for costing								
System tracks cost by storeroom and calculates average recipe cost								
Recipe types:								
Ingredient Recipe (used to establish credits and common units)								
Base Recipes (bulk preparation, butcher tests, items used in other recipes)								
Finished Recipes (menu items resolved to a per unit/serving cost)								

Figure A-41 Computer Systems Surveys (*continued*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
System supports nested recipes (recipes within recipes)								
May define in inventory locations for requisitions and transfers								
Capable of producing shopping lists of inventory items based upon recipe yield								
Capability for experimenting with quantities, yields, and costs								
Recipe retrieval for:								
Recipe editing								
Recipe printing								
Scaling quantities up or down								
Determination of food cost								
Cross referencing								
Conversion of units measured								
Basic Recipe Inquiry Functions								
Ingredient to recipe item cross reference display								
Recipe item inquiry listing defined ingredients								
Expanded ingredient listing of lower level ingredients (full recipe explosion)								
View or print multiple recipes:								
By type or category								
By date of last change								

Figure A-41 Computer Systems Surveys (*continued on next page*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
By cost percentage								
By dollar cost								
Menu Recipe Items (Items that are Directly Priced and Sold)								
Menu items are referenced by:								
Menu name								
Category								
System recipe number								
Point of Sale system or Price Look Up code								
Typing first few characters of recipe name activates a selection window								
May be defined with effective and expiration dates for inclusion in sales analysis								
May be defined by meal period								
Current and future sales prices defined with effective dates for sales analysis								
Daily sales updating options:								
Through workstation entry								
Automated interface to POS								
Sales pricing may be updated globally:								
Using a percentage increase or decrease								
Using a dollar value								
Experimental test sales and cost updates available for pro forma profit analysis								

Figure A-41 Computer Systems Surveys (*continued*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
Menu modeling allows changes in prices, ingredients, and portions:								
To indicate food cost dollars and percents								
To show variance from targets								
Menu Item Inquiry								
Sales analysis display by menu item category for:								
Daily item sales summaries								
MTD item sales summaries								
YTD items sales summaries								
Recipe and inventory item to item cross reference display								
Menu item reference display by cost center								
Recipe Menu Reports								
Menu item sales detail ranked by:								
Dollar sales								
Gross margin								
Units sold								
Menu engineering classifications (star, plow horse, puzzle, dog, etc.)								
Pro forma sales update analysis								
Test recipe expanded ingredient listing								

Figure A-41 Computer Systems Surveys (*continued on next page*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
Profile recipe options:								
Expanded ingredient listing								
Average cost ingredient listing								
Costs by selected department								
Item ingredient report (for kitchen use) to include:								
Item description								
Item type								
Unit of measure								
Count								
Preparation instruction								
Recipe cards to include ingredients, amounts, and instructions								
Recipe item descriptions report available by kitchen or outlet								
Menu item ingredients report available by kitchen or outlet								
Sales item description report available by outlet								
Ingredient search report by outlet								
Monthly / Weekly sales report by outlet to include:								
Description								
Price								

Figure A-41 Computer Systems Surveys (*continued*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
Count								
Total dollars in sales								
Percent of total revenue								
Gross margins								
Other (please specify) ___Food Cost___								
Other (please specify) ___Comparative Date Ranges__								
Comparative sales reports by outlet by day of the week:								
Description								
Count								
Total dollars in sales								
Percent of total revenue								
Other (please specify) ___Percentage comparisons for each item___								
Theoretical profit from sales report by outlet:								
Description								
Price								
Theoretical cost (dollars and percent)								
Count								
Total dollars								
Cost of sales (dollars and percent)								

Figure A-41 Computer Systems Surveys (*continued on next page*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
Sales report by menu item:								
Units sold								
Total dollars								
Cost								
Gross margin								
Percent cost								
Contribution margin by category for each menu item								
Sales summary showing MTD and YTD sales								
Sale summaries by user defined market groups								
Exception report, identifying menu items over cost percentage target								
System generated Standard Portion Control Sheets for kitchens and butcher shop								
System format available for Banquet Beverage Control Form entry								
TOTAL RESPONSES:								
PERCENTAGE OF RESPONSES:								

Figure A-41 Computer Systems Surveys (*continued*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
Cashier Open and Sign-In Functions								
Server open								
Server sign-in								
Cashiers allowed to service checks								
Compulsory sign-in for reorders								
Prevent servers from transaction settlement								
Time-In and Time-Out								
Banked server operation								
Operator Sign-In Functions								
Multiple server / bartender sign-in								
Compulsory closed drawer								
Magnetic stripe or ID badge reader sign-in capabilities								
Training mode								
Operator Sign-Out Functions								
Automatic sign-out								
Manual sign-out								

Figure A-41 Computer Systems Surveys (*continued on next page*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
Basic Guest Check Functions								
Opening check								
Process reorders								
Change table number								
Change number of persons								
Ability to settle check								
Settlement correction noted by revenue center								
Multiple checks per table								
Ability to split check after it is open								
Ability to combine electronic (soft) checks								
Electronic guest check retention and storage in system:								
Until End of Day								
Until End of Day, for the day after the transaction								
One Week								
Automatic soft check number generation (versus the table number plus transaction number)								
Tip reporting functions:								
Transfer partial revenues to different servers from one check								
Ability to transfer checks between servers								

Figure A-41 Computer Systems Surveys (*continued*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
Guest Check Format								
Electronic (soft) check								
Paper check without bar code								
Paper check with bar code								
Sales Transaction Order Entry								
Price look up function and preset keys								
Open departments								
Price modifiers								
Print modifiers								
Promotional pricing								
Menu item quantity up to 999								
Menu item quantity up to 9,999								
Cover count quantities up to 999								
Cover count quantities up to 9,999								
Mnemonics up to 12 characters								
Mnemonics up to 18 characters								

Figure A-41 Computer Systems Surveys (*continued on next page*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
Correction Keys								
Error correct on the last item entered								
Void capability for items previously entered								
Void transaction after item totaled								
Cancel transaction before items are totaled								
Discounts								
Transaction level:								
Fixed dollar								
Fixed percentage								
Open dollar								
Open percent								
Item level:								
Food Discounts								
Food and Liquor Discounts								
Liquor Discounts								
Coupons								
Fixed dollar (Premier, Special Packages, Tours)								

Figure A-41 Computer Systems Surveys (*continued*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
Fixed percent								
Open dollar coupon								
Tax								
Tax exempt								
Manual tax								
Tax percentage								
Value added tax								
Canadian taxing								
Other (please note)								
Transaction Total								
Depressing "Total" will initiate automatic tax calculation								
Fast Finalize (Cash bars, No guest check opened)								
Initiate printing								
Depressing will initiate customer viewing of rear total display								
Menu item sorting (combine like items)								
Automatic service charge posting (Room Service)								

Figure A-41 Computer Systems Surveys (*continued on next page*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
Running subtotal								
Prompt for number of persons								
Transaction Settlement / Tracking								
Numeric entry tendered								
Exact amount tendered								
Preset tendereds ($5, $10, $20, etc.)								
Paid outs								
Currency conversion								
Complimentary tendereds								
Tendered Key Options:								
Depressing key will initiate change dispenser								
Depressing key will initiate drawer opening								
Account number entry check digit verification for city ledger accounts								
Ability to depress tender key for exact change								
Stub receipt with compulsory gift certificate								
Multiple tenders will print 1 check per settlement type								
Charge posting capabilities								

Figure A-41 Computer Systems Surveys (*continued*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
Coupon settlement								
Integrated credit card authorizations capabilities								
Function Keys								
Keyboard positioning of function keys is variable								
Screen display key								
Repeat last item key								
Print a receipt key								
Change location key								
No sale key								
Help keys								
Menu shift key								
Terminal mode switch key (guest check versus cash bar receipt mode)								
Preset supervisor function keys								
Charge tip key								
Cash bar key								
Tips paid out key								
List function keys:								
Price Modifier numbers								

Figure A-41 Computer Systems Surveys (*continued on next page*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
Print Modifier numbers								
Price Look Up numbers								
Departmental specific numbers								
Void by transaction key								
Audit Journal								
Journal printer								
Electronic data capture								
Employee Time Keeping								
Time-in function								
Time-out function								
Ability of time keeping functions to interface to Payroll system								
Miscellaneous								
Customer display screens (so customer can view transaction)								
Up to two cash drawers per terminal								
Track activity data by location								
Touchscreen terminals								
Hand held terminals								

Figure A-41 Computer Systems Surveys (*continued*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
Hand held touchscreen terminals								
Pen-based handheld device								
Integrated magnetic stripe readers								
Integrated signature capture capability								
Minimum of 300 server numbers per system								
Minimum of 400 server numbers per system								
Minimum of 30 meal periods								
Minimum of 50 meal periods								
Minimum of 3,000 menu items with pricing								
Minimum of 5,000 menu items with pricing								
Room Service Functions								
Server assignment when order is ready for delivery								
Automatic gratuity, service charge posting								
Ability to batch enter Door Knob orders after pick-up								
Batched (entered) door knob order report formats:								
Orders are grouped by like item								

Figure A-41 Computer Systems Surveys (*continued on next page*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
Orders are grouped by delivery location and time								
Batched orders are sent to kitchen remote printers at appropriate time								
Kitchen printer automatically sorts orders with similar delivery time to facilitate preparation								
Other Applications								
"Hot Key" from PC to POS for Service Express (network compatible)								
Banquets								
Portable stand alone terminals that will down load information to host								
Team Service Applications								
Automatic separation of tips and revenue between team members								
Point of Sale Interfaces								
Interface to in-room (TV) service ordering system								
Front Office guest room billing								
Back Office journal posting								
Server tip reporting data to the payroll system								

Figure A-41 Computer Systems Surveys (*continued*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
Inventory, Purchasing, Menu Analysis System								
Private Bar systems								
Banquet Sales systems								
Bar code hand held devices								
Retail operation applications								
System Reports								
Easy report customization by "low-tech" staff								
Cashier Financial								
Server Financial with average check								
Outlet Financial with average check computation by meal period								
Outlet Financial with average check (minus staff and promo sales)								
Hourly activity by outlet								
Automatic timed printing of server open checks (to monitor buffet and brunch)								
Sales activity analysis period reports for:								
Daily								
Weekly								
Monthly								

Figure A-41 Computer Systems Surveys (*continued on next page*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
Yearly								
Sales analysis must break out covers by meal periods								
Maximum system End of Day down time not to exceed 30 minutes								
Automated Back Office Food and Beverage Journals to include server / cashier settlements								
Customized automated employee tip reporting formats								
Support Issues								
24 hour, 7 days a week support system								
Dial-up accessibility for trouble shooting and program download								
TOTAL RESPONSES:								
PERCENTAGE RESPONSES:								
General Vendor Information								
System support available 7 days a week								
Telephone support available 24 hours per day								
Vendor completed a detailed system review								

Figure A-41 Computer Systems Surveys (*continued*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
Age of software package								
Last update of software								
Number of current software systems installed								
Vendor maintains international installation and support services								
How long has the company been in business?								
System Cost Information								
Hardware								
Software								
Software, Labor Module								
SUBTOTAL								
DISCOUNT RATES								
DOLLAR DISCOUNT								
Installation and Training Expense								
Installation and Training Number of Man Days								
TOTAL SYSTEM INVESTMENT								

Figure A-41 Computer Systems Surveys (*continued on next page*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
AVERAGE SYSTEM PRICING								
Percent variance to average system pricing								
Annual Maintenance Information								
Extended Program								
Basic Program								
Depot Program								
Purchasing Request Records								
Ability to process food and beverage item purchasing								
Ability to process non food and beverage item purchasing								
Allow purchase of products not defined in system								
Typing first few characters of product name activates a selection window								
Permit specification of generic products								
Automatic line numbering								
Multiple sort options for item sequencing								
Defaults programmed for:								
Item description								

Figure A-41 Computer Systems Surveys (*continued*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
Unit of measure								
Variance percent								
Account numbers								
Vendor								
Low bid prices used as default for purchase order entry of defined products								
Last purchase price used as default for purchase order entry of defined products								
Allow comments in body of purchase requests								
Tax, discounts, freight charges prorated over product items								
Ability for authorized person to approve purchase requests on-line								
User assigned:								
Requisition numbers								
Purchase order numbers								
Market list numbers								
System assigned:								
Requisition numbers								
Purchase order numbers								
Market list numbers								
Printing of Receiving Worksheet in the Receiving area:								

Figure A-41 Computer Systems Surveys (*continued on next page*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
when purchase order is generated								
on date item is due to be delivered								
Unlimited number of lines on purchase request								
Departmental Purchasing Requests								
Distributed entry by departments								
Centralized entry by authorized users								
The following areas / numbers are identified:								
Charge department								
Ship department								
Capital project number								
Job cost number								
Fast line entry support for defined products								
Credit memo record entered as a control feature for stock returns								
Types of departmental purchase request supported by the system:								
Standard blank format								
Pre-defined profiles used to generate standard orders								
Standard blanket releases (multi-shipment, annual orders, i.e. drop ship)								

Figure A-41 Computer Systems Surveys (*continued*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
Purchase Orders, Market Lists, etc.								
Centralized entry by authorized purchasing users								
Departmental entry by authorized purchasing users								
Items grouped by buyer, vendor, and requesting department for selection								
Items may be entered directly								
Items may be selected from multiple or partial departmental requests								
Departmental purchase requests closed by selection to purchase orders								
Capital project orders that exceed budget are rejected by system								
Exceeding buyer approval limit requires separate entry for approval								
Purchase orders may be closed with partial receipts								
Purchase orders are retained in the system until all items are received								
Interactive automatic suggested order amounts based upon on-hand inventories and banquet events								

Figure A-41 Computer Systems Surveys (*continued on next page*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
Blanket Purchase Orders: Multi-Shipment, Annual Orders, Drop Ship, etc.								
May be defined with or without product items								
Dollar limits defined per blanket contract and per release								
Automatic review based on review date and percentage of $ amount released								
May be authorized for release by specific departments								
System maintains number and dollar amount of releases by department								
System maintains detail history of item purchases by blanket purchase orders								
Receiving								
Purchase order or market lists updated by entry of invoice or packing list								
Receiving confirmation log (record of packing list) maintained as separate record								
Receiving confirmation log created directly from user selected P.O. items								
Received status updated in P.O. item by receiving confirmation log								
Worksheets printed with remaining open items during receiving logging								
Receiving confirmation log may be modified or deleted until selected for invoicing								

Figure A-41 Computer Systems Surveys (*continued*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
Inventory (perpetual) stock records updated at P.O. prices by receiving log entry								
Bar code reader support for receiving								
Automatic printing of bar code labels for expected deliveries								
Vendor Invoices								
Items may be entered directly or selected from open P.O. and receiving logs								
May be created from multiple or partial P.O.s								
P.O.s and receiving logs automatically closed by selection to invoices								
Regular and credit adjustment invoices supported								
Computed extensions verified against invoice totals								
Price, quantity, vendor, and extension variances displayed for resolution								
Payment due date specified by vendor for transfer to Accounts Payable								
Ability to track invoices by batch ID number entries for Accounts Payable interface								
Vendor Bid Specifications								
Defined by buyer and product group								

Figure A-41 Computer Systems Surveys (*continued on next page*)

Transaction Functionality	User					System		
	Minimum Function of any system	Additional Feature (nice to have)	Not required by users	Do not Understand Function	TOTAL Responses	1	2	3
						System 1	System 2	System 3
Automatic printing of vendor bid specifications								
On demand printing of vendor bid specifications								
Items entered with different maximum quantities for price bids with quantity breaks								
Bid prices may be entered with future effective dates								
Purchasing Reports								
Purchase history reports								
Merchandise received								
Monthly purchase summary								
Item, product group, location purchases								
Cost changes / variance reports								
Cost by product category reports								
Reconciliation of General Ledger accrual expense accounts (C.G. and U., etc.)								
Distributor / Manufacturer Purchase history by dollars and products								
Total Responses:								
Percentage of Responses:								

Figure A-41 Computer Systems Surveys (*concluded*)

Cost Controller Checklist

DAILY ACTIVITIES AND REPORTING RESPONSIBILITIES			
	Key Officers' Names		
Assignments	**Completed by**	**Dead Line**	**Completed**
Review F&B requisitions—			
Note extensions, unit prices and any discrepancies			
Butcher sales reconciliation to POS			
Review issues, including returns			
Reconcile requisitions to Inventory			
A bid sheet comparison to invoices			
Review Food to Bar and Bar to food			
Prepare average F&B check report			
Banquet Beverage Controls as needed			
Reconciliation of host and cash bar			
Review daily Flash Report			
Weekly Activities and Reporting Responsibilities			
Review inter-bar Transfers			
Review and summarize credits to cost			
Spot-check portion control			
Spot-check storeroom stock rotation and controls			
Spot-check weekly bid sheets			
Review buying procedures			
Observe banquet serving control			
Spot-check bar pars, rotating bars			
Review Cafeteria food requisition			
Walk through all kitchen storage			
Check MOD Key log for after-hours			
Observe storeroom issuing and receiving procedures			
Compare F&B purchase prices to reveal increases			
Review cost for special functions, e.g. special brunches, advertised events, etc			
Monthly Activities and Reporting			
Prepare inventory memo			

Figure A-42 Cost Controller Checklist (*continued on next page*)

Cost Controller Checklist (*concluded*)

Prepare outlets for inventory			
Review Unit/Case prices before inventories			
Complete inventories procedures			
Prepare Cost Controller Checklist			
Do outlets P&L pages			
Cover Analyses Report			
Analyze menu for popularity and popularity			
Review F&B dead stock list			
Review potentials - rotating basis			
Conduct butcher potential variances			
Market basket survey			
Annual Activities and Reporting			
Third quarter, prepare business plan			

Figure A-42

Forms

Beverage Pour Cost Sheet

Product Number	Item Name	Size of Item	# of Units per Bottle	Cost Pour in Ounces	Mixers	Total Cost	Selling Price in dollars	Selling Price in Percent

Figure A-43

Weekly Food Bid Form

Date Received: BID IN EFFECT FROM: TO:

Prepared By:

Product Number	Item Description	Pack Size	Brand Name	Unit of Measure	Vendor	Vendor	Vendor	Vendor

Figure A-44

Standard Recipes Cost Sheet

RECIPES COST SHEET DATE:_____

ITEM:_____ OUTLET:_____

PORTION YIELD:_____ MEAL PERIOD:_____

PORTION SIZE:_____

				Cost Data		
Item #	Ingredient	Quantity	U/M	Unit	Cost	Total Cost
			TOTAL COST =			

PORTION COST : _____

SALES PRICE : _____

COST PERCENT: _____

Figure A-45

To Be Used for Authorizing all Spillage, Breakage, and Spoilage

DATE:_____

AUTHORIZATION:_____

OUTLET:_____

Name of Server, Chef, or Bartender	Number of Drink, Food, or Items Lost	Brand or Product #	Type:W -Wine L - Liquor F - Food	Value per Unit	Total Value	Reason

Figure A-46

Interdepartmental Transfers

Note: Send a copy to the Accountant

Date:

To – Outlet: From – Outlet:

Manager Approval: Manager Approval:

Item Number	Item	Quantity	Item Cost	Total Cost

Figure A-47

Guidelines on Discrimination based on Gender (From the Code of Federal Regulations, Vol. 29, § 1604.11). Sexual Harassment

a) Harassment on the basis of sex is a violation of Sec. 703 of Title VII. Unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature constitute sexual harassment when (1) submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment, (2) submission to or rejection of such conduct by an individual is used as a basis for employment decisions affecting such individual, or (3) such conduct has the purpose or effect of unreasonable interfering with an individual's work performance or creating an intimidating, hostile or offensive working environment.

b) In determining whether alleged conduct constitutes sexual harassment, the Commission will look at the record as a whole and at the totality of the circumstances, such as the nature of the sexual advances and the context in which the alleged incidents occurred. The determination of the legality of a particular action will be made from the facts, on a case by case basis.

c) With respect to conduct between fellow employees, an employer is responsible for acts of sexual harassment in the workplace where the employer (or its agents or supervisory employees) knows or should have known of the conduct, unless it can show that it took immediate and appropriate corrective action.

d) An employer may also be responsible for the acts of nonemployees, with respect to sexual harassment of employees in the workplace, where the employer (or its agents or supervisory employees) knows or should have known of the conduct and fails to take immediate and appropriate corrective action. In reviewing these cases the commission will consider the extent of the employer's control and any other legal responsibility which the employer may have with respect to the conduct of such nonemployees.

e) Prevention is the best tool for the elimination of sexual harassment. An employer should take all steps necessary to prevent sexual harassment from occurring, such as affirmatively raising the subject, expressing strong disapproval, developing appropriate sanctions, informing employees of their right to raise and how to raise the issue of harassment under Title VII, and developing methods to sensitize all concerned.

Other related practices: Where employment opportunities or benefits are granted because of an individual's submission to the employer's sexual advances or requests for sexual favors, the employer may be held liable for unlawful sex discrimination against other persons who were qualified for but denied that employment opportunity or benefit.