



BROWN AND WILLIAMSON TOBACCO CORPORATION



MOUTH SECTION: CA
CENTER SECTION:
TOBACCO SECTION:

PAGE 123
BRAND: VICEROY LIGHTS
VERSION: L F W N
MANUFACTURER: REPUBLIC
COUNTRY OF MANUFACTURE: COSTA RICA
REPORT DATE: 12DEC90

LAST DATE RECEIVED >>>	SPEC	AUG89	NOV88	CURRENT AVERAGE
SMOKING (/CIG)				
TAR (MG)	12.0	12.5	11.9	12.2
NICOTINE (MG)	1.00	1.19	1.21	1.20
TAR NICOTINE RATIO	12.00	10.44	9.82	10.13
EFFICIENCY (%)	-	35.7	34.2	34.9
PUFFS	-	8.5	8.9	8.7
CO (MG)	-	9.3	8.3	8.8
P.D. (MM)				
CIGARETTE	-	87	84	86
SEALED CIGARETTE	125	105	102	103
TOB. SECT.	-	38	35	36
LENGTH (MM)				
CIGARETTE	80	80	80	80
FILTER	20	20	20	20
TIPPING	25	25	25	25
CIRC. (MM)	24.75	24.94	24.90	24.92
WEIGHT (MG)				
CIGARETTE	981	955	954	954
TOBACCO	769	746	742	744
DENSITY (MG/CC)	263	251	253	252
FILTER				
PLASTICIZER TRIACETIN (%)	8.0	8.2	-	8.2
PLASTICIZER TEGDA (%)	-	-	-	-
VENTILATION RATE (%)	30.0	26.9	29.7	28.3
PAPER				
POROSITY (CORESTA)	50	48	49	49
CITRATE (%)	-	0.9	0.8	0.9
PHOSPHATE (%)	-	-	-	-
TOB. ANALYSES (%)				
ALKALOIDS	-	2.29	2.31	2.30
TOTAL SUGAR	-	15.0	17.0	16.0
REDUCING SUGAR	-	13.4	15.8	14.6
MOIST. (PKG)	-	14.0	13.1	13.6
MENTHOL	-	0.00	-	0.00
PROP. GLYCOL	-	1.3	1.4	1.4
GLYCERIN	-	1.3	1.4	1.3
NITRATE	-	0.77	0.57	0.67
PHYSICAL PROPERTIES				
CORR. FIRMNESS (CTS/25 CIG)	-	-	209	209
HARDNESS (MM)	-	2.47	-	2.47
END STABILITY (MG/CIG)	-	33	38	36
COAL RETENTION (%)	-	90	100	95



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MOUTH SECTION: CA
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COUNTRY OF MANUFACTURE: COSTA RICA
REPORT DATE: 12DEC90

LAST DATE RECEIVED >>>	SPEC	MAY90	CURRENT AVERAGE
SMOKING (/CIG)			
TAR (MG)	12.0	12.7	12.7
NICOTINE (MG)	1.00	1.17	1.17
TAR NICOTINE RATIO	12.00	10.88	10.88
EFFICIENCY (%)	34.0	34.5	34.5
PUFFS	8.0	8.3	8.3
CO (MG)	10.0	10.1	10.1
P.D. (MM)			
CIGARETTE	75	98	98
SEALED CIGARETTE	110	111	111
TOB. SECT.	35	44	44
LENGTH (MM)			
CIGARETTE	84	83	83
FILTER	20	20	20
TIPPING	30	30	30
CIRC. (MM)	24.75	24.80	24.80
WEIGHT (MG)			
CIGARETTE	1020	1021	1021
TOBACCO	801	809	809
DENSITY (MG/CC)	257	262	262
FILTER			
PLASTICIZER TRIACETIN (%)	8.0	2.1	2.1
PLASTICIZER TEGDA (%)	-	-	-
VENTILATION RATE (%)	20.0	18.8	18.8
PAPER			
POROSITY (CORESTA)	50	47	47
CITRATE (%)	0.9	0.9	0.9
PHOSPHATE (%)	-	-	-
TOB. ANALYSES (%)			
ALKALIDS	-	2.34	2.34
TOTAL SUGAR	-	18.7	18.7
REDUCING SUGAR	-	16.5	16.5
MOIST. (PKG)	-	13.0	13.0
MENTHOL	-	0.00	0.00
PROP. GLYCOL	-	0.3	0.3
GLYCERIN	-	1.4	1.4
NITRATE	-	0.66	0.66
PHYSICAL PROPERTIES			
CORR. FIRMNESS (CTS/25 CIG)	-	-	-
HARDNESS (MM)	-	2.63	2.63
END STABILITY (MG/CIG)	-	24	24
COAL RETENTION (%)	-	90	90

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QUALITY INDEX
 (WEIGHT FACTORS IN PARENTHESES)

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 BRAND: VICEROY
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 MANUFACTURER: REPUBLIC
 COUNTRY OF MANUFACTURE: COSTA RICA
 MARKET: COSTA RICA
 PACKAGE TYPE: 20 HL C
 LAST DATE RECEIVED >>> AUG89

MOULTH SECTION: CA
 CENTER SECTION:
 TOBACCO SECTION:

CIGARETTE	QI	PACK	QI	CARTON / BUNDLE	QI
	--		--		--
DIRTY (10)	-	FILM MISSING (20)	-	MISSING FILM (20)	-
TORN (10)	-	PACKAGES STUCK TOGETHER (10)	-	WRINKLED FILM (10)	-
HOLES (10)	-	IMPROPER FOLD/TOP,BOTTOM,SIDES (5)	-	FILM TOO TIGHT (10)	-
SPOTS/CASING AND FLAVORING, DIL, INK, STAINS	-	FILM TOO TIGHT (10)	-	FILM TOO LOOSE (10)	-
SOME FAINTLY VISIBLE SPOTS (1)	85	FILM TOO LOOSE (10)	-	FILM NOT PROPERLY SEALED (10)	-
SOME CLEARLY VISIBLE SPOTS (5)	-	SCORCHED FILM (50)	-	SCRATCHED (10)	-
VERY OBVIOUS DARK SPOTS (20)	-	TORN FILM (30)	-	DIRTY (10)	-
TOTAL SPOTTING INDEX	85	TOBACCO UNDER FILM (10)	100	INK SHEARS (10)	-
WRINKLED (5)	125	WRINKLED FILM (10)	-	OFF COLOR (10)	-
MASHED (5)	-	FILM IMPERFECTIONS (10)	-	IMPROPER PRINT REGISTRATION (10)	-
PRINT TOO LIGHT (1)	-	IMPROPERLY SEALED FILM (10)	-	TOP FLAP NOT GLUED (10)	-
PRINT TOO DARK (1)	-	DIRTY LABEL (50)	-	END FLAP NOT GLUED (5)	-
PRINT OUT OF REGISTRATION (2)	-	GLUE/FOREIGN MATERIAL ON LABEL (10)	-	FOLDED MORE THAN 3MM FROM SQUARE (5)	-
TOBACCO UNDER THE SEAM OR TIPPING (2)	40	SQUASHED (50)	-	WRONG BRANDS (100)	-
FOREIGN MATTER (50)	-	LABEL UPSIDE DOWN (10)	-	MISSING PACKS (100)	-
DEFECTIVE END CUT OFF (10)	-	UNGLUED LABEL (10)	-	IMPROPER PACK ORIENTATION (5)	-
CIGARETTE TOO LONG/TOD SHORT	-	OFF COLOR LABEL PRINTING (10)	-		
SOME CIGARETTES UPSIDE DOWN (10)	-	FAULTY PRINTING (20)	-		
MISALIGNED TIPPING (1)	-	NOTCH/SHALL WINDOW ON BACK OF PACK, TOP LEFT CORNER (10)	-		
IMPROPERLY GLUED TIPPING (20)	-	DEFECTIVE INNER FRAME PLACEMENT (10)	-		
MISSING FILTER (50)	-	IMPROPER LABEL REGISTRATION (10)	100		
VOID AT TOBACCO/FILTER JUNCTION (5)	-	MISSING/WRONG CIGARETTE (100)	-		
AIR POCKETS/FILTER NOT COMPLETELY ATTACHED (50)	-	MISSING TEAR TAPE (30)	-		
DIRTY FILTER (20)	-	IMPROPER TEAR TAPE ALIGNMENT (5)	50		
FILTER PITTING (5)	-	IMPROPERLY POSITIONED TEAR TAPE (5)	50		
WRINKLED TIPPING (5)	-	TEAR TAPE - HARD TO OPEN (5)	-		
RAW SEAM/1.0 MM OR MORE ROLLED BACK (5)	-	IMPROPERLY GLUED CLOSURE (10)	-		
OPENED SEAM (50)	-	WRONG CLOSURE (50)	-		
ENDS NOT FULL (20)	500	MISSING CLOSURE (50)	-		
SOFT SPOTS/CIGARETTE NOT FILLED FIRMLY (20)	300	CLOSURE MISALIGNMENT (10)	50		
		FAULTY CLOSURE PRINTING (10)	-		
		TORN FOIL (5)	-		
		IMPROPER TOP FOIL FOLD (5)	-		
		IMPROPER BOTTOM FOIL FOLD (5)	-		
		IMPROPERLY GLUED/CUT FOIL (10)	-		
LAST DATE RECEIVED	AUG89	NOV88			
TOTAL CIGARETTE DEFECTS	1050	2135			
TOTAL PACK DEFECTS	350	100			
TOTAL CARTON/BUNDLE DEFECTS	0	0			
PACK SEAL DEFECTS	100 (0)	100 (1)			
OVERALL QUALITY INDEX	1500	2335			

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 MANUFACTURER: REPUBLIC
 COUNTRY OF MANUFACTURE: COSTA RICA
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LAST DATE RECEIVED >>>	SPEC	AUG89	NOV88	CURRENT AVERAGE
SMOKING (/CIG)				
TAR (MG)	15.5	14.7	15.0	14.8
NICOTINE (MG)	1.10	1.27	1.48	1.37
TAR NICOTINE RATIO	14.09	11.55	10.14	10.79
EFFICIENCY (%)	-	34.4	31.4	32.9
PUFFS	-	8.1	7.9	8.0
CO (MG)	-	11.2	11.1	11.1
P.D. (MM)				
CIGARETTE	120	105	100	102
SEALED CIGARETTE	-	-	102	102
TOB. SECT.	-	42	37	40
LENGTH (MM)				
CIGARETTE	80	80	80	80
FILTER	20	20	20	20
TIPPING	24	24	25	25
CIRC. (MM)	24.75	24.76	24.76	24.76
WEIGHT (MG)				
CIGARETTE	973	955	942	949
TOBACCO	763	759	737	748
DENSITY (MG/CC)	261	261	254	257
FILTER				
PLASTICIZER TRIACETIN (%)	8.0	9.4	-	9.4
PLASTICIZER TEGDA (%)	-	-	-	-
VENTILATION RATE (%)	-	0.0	3.6	3.6
PAPER				
POROSITY (CORESTA)	80	86	80	83
CITRATE (%)	-	0.9	0.9	0.9
PHOSPHATE (%)	-	-	-	-
TOB. ANALYSES (%)				
ALKALOIDS	-	2.35	2.33	2.34
TOTAL SUGAR	-	15.3	17.2	16.3
REDUCING SUGAR	-	13.6	15.5	14.6
MOIST. (PKG)	-	13.2	13.2	13.2
MENTHOL	-	-	-	-
PROP. GLYCOL	-	1.4	1.5	1.4
GLYCERIN	-	1.2	1.5	1.4
NITRATE	-	0.69	0.57	0.63
PHYSICAL PROPERTIES				
CORR. FIRMNESS (CTS/25 CIG)	-	-	193	193
HARDNESS (MM)	-	2.73	-	2.73
END STABILITY (MG/CIG)	-	16	17	16
COAL RETENTION (%)	-	97	97	97

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BROWN AND WILLIAMSON TOBACCO CORPORATION



QUALITY INDEX
 (HEIGHT FACTORS IN PARENTHESES)

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 BRAND: KOOL
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 MANUFACTURER: REPUBLIC
 COUNTRY OF MANUFACTURE: COSTA RICA
 MARKET: COSTA RICA
 PACKAGE TYPE: 20 SC C
 LAST DATE RECEIVED >>> MAY90

MOUTH SECTION:
 CENTER SECTION:
 TOBACCO SECTION:

CIGARETTE	QI	PACK	QI	CARTON / BUNDLE	QI
DIRTY (10)	-	FILM MISSING (20)	-	MISSING FILM (20)	-
TORN (10)	-	PACKAGES STUCK TOGETHER (10)	-	WRINKLED FILM (10)	-
HOLES (10)	-	IMPROPER FOLD/TOP,BOTTOM,SIDES (5)	-	FILM TOO TIGHT (10)	-
SPOTS/CASING AND FLAVORING, OIL, INK, STAINS	-	FILM TOO TIGHT (10)	-	FILM TOO LOOSE (10)	-
SOME FAINTLY VISIBLE SPOTS (1)	85	FILM TOO LOOSE (10)	-	FILM NOT PROPERLY SEALED (10)	-
SOME CLEARLY VISIBLE SPOTS (5)	-	SCORCHED FILM (50)	-	SCRATCHED (10)	-
VERY OBVIOUS DARK SPOTS (20)	-	TORN FILM (30)	-	DIRTY (10)	-
TOTAL SPOTTING INDEX	85	TOBACCO UNDER FILM (10)	100	INK SHEARS (10)	-
WRINKLED (5)	125	WRINKLED FILM (10)	-	OFF COLOR (10)	-
MASHED (5)	-	FILM IMPERFECTIONS (10)	-	IMPROPER PRINT REGISTRATION (10)	-
PRINT TOO LIGHT (1)	-	IMPROPERLY SEALED FILM (10)	-	TOP FLAP NOT GLUED (10)	-
PRINT TOO DARK (1)	-	DIRTY LABEL (50)	-	END FLAP NOT GLUED (5)	-
PRINT OUT OF REGISTRATION (2)	-	GLUE/FOREIGN MATERIAL ON LABEL (10)	-	FOLDED MORE THAN 3MM FROM SQUARE (5)	-
TOBACCO UNDER THE SEAM OR TIPPING (2)	30	SQUASHED (50)	-	WRONG BRANDS (100)	-
FOREIGN MATTER (50)	-	LABEL UPSIDE DOWN (10)	-	MISSING PACKS (100)	-
DEFECTIVE END CUT OFF (10)	-	UNGLUED LABEL (10)	-	IMPROPER PACK ORIENTATION (5)	-
CIGARETTE TOO LONG/TOO SHORT (2)	-	OFF COLOR LABEL PRINTING (10)	-		
SOME CIGARETTES UPSIDE DOWN (10)	-	FAULTY PRINTING (20)	-		
MISALIGNED TIPPING (1)	-	NOTCH/SMALL HINDON ON BACK OF PACK, TOP LEFT CORNER (10)	-		
IMPROPERLY GLUED TIPPING (20)	-	DEFECTIVE INNER FRAME PLACEMENT (10)	-		
MISSING FILTER (50)	-	IMPROPER LABEL REGISTRATION (10)	-		
VOID AT TOBACCO/FILTER JUNCTION (5)	-	MISSING/WRONG CIGARETTE (100)	-		
AIR POCKETS/FILTER NOT COMPLETELY ATTACHED (50)	-	MISSING TEAR TAPE (30)	-		
DIRTY FILTER (20)	-	IMPROPER TEAR TAPE ALIGNMENT (5)	25		
FILTER PITTING (5)	-	IMPROPERLY POSITIONED TEAR TAPE (5)	-		
WRINKLED TIPPING (5)	-	TEAR TAPE - HARD TO OPEN (5)	-		
RAN SEAM/1.0 MM OR MORE ROLLED BACK (5)	-	IMPROPERLY GLUED CLOSURE (10)	-		
OPENED SEAM (50)	-	WRONG CLOSURE (50)	-		
ENDS NOT FULL (20)	200	MISSING CLOSURE (50)	-		
SOFT SPOTS/CIGARETTE NOT FILLED FIRMLY (20)	-	CLOSURE MISALIGNMENT (10)	-		
		FAULTY CLOSURE PRINTING (10)	-		
		TORN FOIL (5)	-		
		INPROPER TOP FOIL FOLD (5)	-		
		INPROPER BOTTOM FOIL FOLD (5)	-		
		IMPROPERLY GLUED/CUT FOIL (10)	-		
LAST DATE RECEIVED	MAY90	AUG89	NOV88		
TOTAL CIGARETTE DEFECTS	440	2480	3550		
TOTAL PACK DEFECTS	125	375	275		
TOTAL CARTON/BUNDLE DEFECTS	0	10	0		
PACK SEAL DEFECTS	100 (10)	100 (1)	- (-1)		
OVERALL QUALITY INDEX	465	2965	3825		

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MOUTH SECTION: CA
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BRAND: KOOL
VERSION: K F C M
MANUFACTURER: REPUBLIC
COUNTRY OF MANUFACTURE: COSTA RICA
REPORT DATE: 12DEC90

LAST DATE RECEIVED >>>	SPEC	MAY90	AUG89	NOV88	CURRENT AVERAGE
SMOKING (1/CIG)					
TAR (MG)	15.5	17.0	16.1	16.6	16.6
NICOTINE (MG)	1.20	1.51	1.46	1.65	1.49
TAR NICOTINE RATIO	12.92	11.27	10.98	10.03	11.13
EFFICIENCY (%)	-	33.7	33.4	31.2	33.6
PUFFS	-	8.9	8.5	8.2	8.7
CO (MG)	-	11.7	11.7	12.2	11.7
P.D. (MM)					
CIGARETTE	125	103	105	102	104
SEALED CIGARETTE	-	-	105	103	105
TOB. SECT.	-	45	48	40	46
LENGTH (MM)					
CIGARETTE	84	84	83	84	83
FILTER	20	20	20	21	20
TIPPING	24	24	24	24	24
CIRC. (MM)	24.75	24.70	24.77	24.80	24.74
HEIGHT (MG)					
CIGARETTE	1026	1011	983	994	997
TOBACCO	813	822	794	784	808
DENSITY (MG/CC)	260	267	257	254	262
FILTER					
PLASTICIZER TRIACETIN (%)	8.0	2.6	8.5	-	5.5
PLASTICIZER TEGDA (%)	-	-	-	-	-
VENTILATION RATE (%)	-	0.0	0.0	3.6	0.0
PAPER					
POROSITY (CORESTA)	80	81	74	89	78
CITRATE (%)	-	1.0	0.9	0.7	1.0
PHOSPHATE (%)	-	-	-	-	-
TOB. ANALYSES (%)					
ALKALOIDS	-	2.20	2.53	2.38	2.37
TOTAL SUGAR	-	15.2	13.7	15.8	14.4
REDUCING SUGAR	-	12.9	12.3	14.4	12.6
MOIST. (PKG)	-	12.3	13.1	12.3	12.7
MENTHOL	-	0.36	0.27	0.31	0.31
PROP. GLYCOL	-	0.2	1.0	1.0	0.6
GLYCERIN	-	1.3	1.4	1.4	1.3
NITRATE	-	0.58	0.66	0.67	0.62
PHYSICAL PROPERTIES					
CORR. FIRMNESS (CTS/25 CIG)	-	-	-	184	-
HARDNESS (MM)	-	2.43	2.51	-	2.47
END STABILITY (MG/CIG)	-	16	13	36	15
COAL RETENTION (%)	-	83	100	87	92



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MOUTH SECTION: CA
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BRAND: KENT
VERSION: L F W N
MANUFACTURER: REPUBLIC
COUNTRY OF MANUFACTURE: COSTA RICA
REPORT DATE: 12DEC90

LAST DATE RECEIVED >>>	SPEC	AUG90	APR90	MAR90	NOV89	CURRENT AVERAGE	AVERAGE OF 4 PREVIOUS DATA POINTS
SHOKING (/CIG)							
TAR (MG)	15.0	13.3	12.6	11.3	13.9	12.8	13.7
NICOTINE (MG)	1.20	1.13	1.09	1.01	1.12	1.09	1.26
TAR NICOTINE RATIO	12.50	11.76	11.57	11.19	12.34	11.73	10.84
EFFICIENCY (%)	-	35.0	35.1	34.0	33.0	34.3	33.4
PUFFS	-	9.1	8.1	8.6	9.2	8.7	9.2
CO (MG)	14.0	11.4	11.1	10.4	11.2	11.0	11.0
P.D. (MM)							
CIGARETTE	-	103	107	105	98	103	97
SEALED CIGARETTE	130	119	121	127	112	120	111
TOB. SECT.	-	56	57	64	58	59	48
LENGTH (MM)							
CIGARETTE	80	80	80	80	80	80	80
FILTER	20	20	20	20	20	20	20
TIPPING	25	24	25	25	24	25	25
CIRC. (MM)	24.75	24.73	24.80	24.67	24.86	24.76	24.83
HEIGHT (MG)							
CIGARETTE	995	996	995	977	972	985	997
TOBACCO	775	797	792	778	767	784	793
DENSITY (MG/CC)	270	274	270	269	262	269	270
FILTER							
PLASTICIZER TRIACETIN (%)	8.0	8.2	8.0	7.3	7.9	7.9	7.7
PLASTICIZER TEGDA (%)	-	-	-	-	-	-	-
VENTILATION RATE (%)	16.0	19.3	16.8	24.5	18.8	19.8	18.4
PAPER							
POROSITY (CORESTA)	50	45	47	50	45	47	49
CITRATE (%)	-	0.7	0.9	0.8	0.8	0.8	0.8
PHOSPHATE (%)	-	-	-	-	-	-	-
TOB. ANALYSES (%)							
ALKALOIDS	-	1.79	2.04	1.96	1.87	1.92	2.12
TOTAL SUGAR	-	18.6	16.0	17.4	15.7	16.9	16.4
REDUCING SUGAR	-	14.2	13.5	15.0	13.4	14.0	13.6
MOIST. (PKG)	-	13.5	13.3	11.9	10.4	12.3	12.7
MENTHOL	-	-	-	-	-	-	-
PROP. GLYCOL	-	0.7	0.6	0.8	0.9	0.8	1.1
GLYCERIN	-	1.5	1.4	1.3	1.2	1.4	1.5
NITRATE	-	0.64	0.85	0.62	0.75	0.71	0.64
PHYSICAL PROPERTIES							
CORR. FIRMNESS (CTS/25 CIG)	-	-	-	-	-	-	180
HARDNESS (MM)	-	2.07	2.09	2.21	2.14	2.13	2.31
END STABILITY (MG/CIG)	-	10	16	10	3	10	16
COAL RETENTION (%)	-	100	93	100	97	98	99