

Mr. J. B. McCarthy
Vice President - Manufacture and Leaf

October 13, 1967

O. N. Coty, Manager - Quality Control
Research and Development

Physical Properties - Non-Filter Market Lot
4th Quarter 1967

We are enclosing our report on the Physical Properties of the following non-filter cigarettes from the Market Lot 4th Quarter 1967 purchased October 3, 1967.

LUCKY STRIKE	HERBERT TAREYTON	King Size Old Gold
Camel	PALL MALL	Philip Morris Commander
Kool	King Size Chesterfield	King Size Raleigh (Plain)

The Physical Properties of the various brands appear normal.

GBA:sr



Enclosure

cc: Mr. H. G. French, Director of Manufacturing
Mr. J. E. Dillard, Manager, Virginia Branch
Mr. N. B. Lufty, Manager, Reidsville Branch
Mr. H. V. H. Stoevers, Jr., Manager, Durham Branch
Mr. J. H. Waterfill, Jr., Manager, Louisville Branch
Mr. H. J. Prout, General Supervisor of Machinery, Durham Branch

bc: E. S. Harlow
O. N. Coty
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P. R. Collier
E. P. Barbee
G. B. Acrce

SUMMARY OF PHYSICAL PROPERTIES - MARKET LOT 4th QUARTER-67
 (Non-Filter Brands - Purchased Oct. 3, 1967)

<u>Brand</u>	<u>Carton Dates of Manufacture</u>	<u>Cigt Length (mm)</u>	<u>Basis Avg Wt (cigts/ 4 oz)</u>	<u>Lot Avg Wt (cigts/ 4 oz)</u>	<u>Std Cigts (%)</u>	<u>Sum of Extremes (%)</u>	<u>Avg Moisture (%)</u>	<u>Airflow (cc/sec)</u>	<u>Pressure Drop Cigt. (cm)</u>
LUCKY STRIKE	2-Aug., 2-Sept., & 2-Oct.	70	116	115.9	98.3	0.0	12.3	19.0	7.5
Camel	3-Sept.	70	113	113.2	95.3	0.0	12.2	22.2	6.3
Kool	3-Unknown	70	124	124.4	99.8	0.0	11.5	22.3	6.0
H. TAREYTON	3-Sept.	85	98	98.6	96.2	0.0	12.0	16.8	8.3
PALL MALL	6-Oct.	85	99	99.2	96.1	0.0	12.6	17.9	8.1
K.S. Chesterfield	3-Sept.	85	98	98.5	94.0	0.0	11.9	18.3	7.8
K.S. Old Gold	3-Sept.	85	103	102.9	92.5	0.0	9.5	22.1	6.2
Philip Morris Commander	3-Sept.	85	98	97.8	95.8	0.0	12.4	18.2	7.7
K.S. Raleigh (plain end)	3-Unknown	85	102	102.1	93.7	0.7	11.4	21.2	6.6

SUMMARY OF PHYSICAL PROPERTIES - MARKET LOT 4th QUARTER-67
 (Non-Filter Brands - Purchased Oct. 3, 1967)

(Cont'd)

<u>Brand</u>	<u>Circum- ference</u> (mm)	<u>Sieve Analysis</u>				<u>Width of Cut</u> (cut/in)	<u>Slivers</u> (%)	<u>Loose Ends</u> (%)	<u>Avg Leakage Cellophane Seals</u> (cc/sec)	<u>Paper Porosity</u> (sec)	<u>Free Burning Rate</u> (mg/min)
		<u>2 mm</u> (%)	<u>1 mm</u> (%)	<u>½ mm</u> (%)	<u>Thru ½ mm</u> (%)						
LUCKY STRIKE	25.02	41.5	45.7	11.7	1.1	27.2	0.33	1.11	22.8	50	45.7
Camel	25.37	45.1	42.4	11.7	0.8	29.3	0.92	1.02	27.0	24	54.7
Kool	25.13	35.1	47.4	16.0	1.5	28.7	0.55	3.21	32.0	43	53.0
H. TAREYTON	24.92	38.2	47.3	13.1	1.4	27.9	0.30	0.87	13.7	48	56.9
FALL MALL	25.00	43.6	44.0	11.3	1.1	28.9	0.44	0.66	15.2	30	58.0
K.S. Chesterfield	25.08	42.7	42.8	13.2	1.3	28.4	1.53	1.00	27.7	20	50.5
K.S. Old Gold	25.36	26.5	53.3	18.6	1.6	28.1	1.35	3.91	23.0	36	60.1
Philip Morris Commander	25.28	37.1	42.8	17.0	3.1	30.2	0.57	1.51	32.0	27	59.9
K.S. Raleigh (plain end)	24.70	40.6	44.0	14.1	1.3	28.8	0.59	1.79	32.0	22	60.9

BREAKDOWN OF PHYSICAL PROPERTIES BY BRANCHES

10-13-

MARKET LOT - 4th QUARTER 1967

Purchase Date 10-3-67

<u>Branch</u>	<u>Carton Dates of Manufacture</u>	<u>Cigt Length (mm)</u>	<u>Basis Avg Wt (cigts/ 4 oz)</u>	<u>Lot Avg Wt (cigts/ 4 oz)</u>	<u>Std Cigts (%)</u>	<u>Sum of Extremes (%)</u>	<u>Avg Moisture (%)</u>	<u>Airflow (cc/sec)</u>	<u>Pressure Drop (cm)</u>
<u>LUCKY STRIKE</u>									
Virginia	2-Sept.	70	116	116.4	97.8	0.0	12.4	18.9	7.5
Reidsville	2-Aug.	70	116	115.2	97.8	0.0	12.4	19.7	7.3
Louisville	2-Oct.	70	116	116.1	99.5	0.0	12.0	18.5	7.8
<u>PALL MALL</u>									
Virginia	2-Oct.	85	99	99.1	95.8	0.0	12.4	18.3	7.9
Reidsville	2-Oct.	85	99	99.3	95.3	0.0	12.8	19.1	7.6
Louisville	2-Oct.	85	99	99.2	97.3	0.0	12.5	16.4	8.9

Branch	Circum- ference (mm)	Sieve Analysis				Thru $\frac{1}{2}$ mm (%)	Loose Ends (%)	Avg Leakage Cellophane Seals (cc/sec)	Paper Porosity (sec)	Free Burning Rate (mg/min)
		2 mm (%)	1 mm (%)	$\frac{3}{4}$ mm (%)						
LUCKY STRIKE										
Virginia	25.05	42.6	44.7	11.6	1.1	0.87	21.0	56	44.1	
Reidsville	25.00	41.5	46.7	10.8	1.0	1.15	31.0	43	45.3	
Louisville	25.03	40.4	45.5	12.8	1.3	1.32	16.5	50	47.6	
PALL MALL										
Virginia	25.01	44.0	43.8	11.1	1.1	0.60	16.5	35	57.0	
Reidsville	25.05	43.2	45.0	10.7	1.1	0.71	20.0	25	57.1	
Louisville	24.95	43.5	43.2	12.1	1.2	0.67	9.0	32	60.1	

3RD QUARTER 1967

MARKET LOT NON-FILTER BRANDS - PHYSICAL PROPERTIES AND TOBACCO ANALYSIS

Brand	Cigt. Length (mm)	Cigt. /4 Oz. (mm)	Air Flow (cc/sec)	P.D. Cigt. (cm)	Circ. (mm)	Paper Poro. (sec)	Free Burning Rate (mg/min)	Tobacco Analysis								Menthol Cigarette Tobacco (mg/cigt)
								%TVB as NH ₃	%Nic.	%TVB- Nic.	Nic/TVB as NH ₃	% Sugar B.I.	as Dext. A.I.	% Ash	pH	
LUCKY STRIKE	70	116	18.5	7.6	24.99	50	45.4	.375	1.61	.206	.45	12.4	13.8	16.50	5.45	-
Camel	70	113	21.7	6.3	25.41	25	52.6	.397	1.62	.227	.43	11.9	14.1	16.04	5.40	-
Kool	70	126	24.1	5.7	25.17	51	53.9	.484	2.22	.251	.48	11.1	12.6	15.32	5.30	1.95
H. TAREYTON	85	98	16.9	8.4	24.94	51	56.0	.369	1.60	.201	.46	11.8	14.1	16.51	5.40	-
PALL MALL	85	99	17.9	8.3	24.96	35	57.8	.405	1.70	.226	.44	12.3	14.1	16.76	5.45	-
K.S.Chesterfield	85	97	16.2	9.2	25.05	23	51.9	.348	1.42	.199	.43	13.3	15.0	16.36	5.45	-
K.S. Old Gold	85	103	22.6	6.3	25.39	31	60.0	.406	1.77	.220	.46	8.1	11.0	17.63	5.30	-
Philip Morris Commander	85	97	17.6	8.2	25.24	25	56.9	.513	1.78	.326	.36	10.6	13.2	15.62	5.30	-
K.S. Raleigh (Plain)	85	102	22.1	6.3	24.91	22	62.0	.443	2.03	.230	.48	12.7	14.5	15.42	5.30	-

TFP:rwk
8-8-67