

-6542

ON & HEDGES 100 (D6AYK)

versus

G BENSON & HEDGES 100 (D6AYL)

1000364896

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PHILIP MORRIS U.S.A.

RESEARCH CENTER

CHARGE NO. & TITLE: 4010 - BRAND DEVELOPMENT

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DATE: March 23, 1977 PERIOD COVERED:

REPORT TITLE: R-6542

CONTROL: BENSON & HEDGES 100 (D6AYK)

versus

EXPERIMENTAL: 10 MG BENSON & HEDGES 100 (D6AYL)

WRITTEN BY Archie Williams
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KEYWORDS:

10 mg Benson & Hedges 100

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Summary of Va. Panel Test R-6542

The Control Benson & Hedges 100 coded D6AYK received fewer undesirable comments by:

- (1) Benson & Hedges Smokers ($p < .025$)
- (2) Combined Panel ($p < .025$)

On the undesirable comments question the full-flavored cigarette smokers accorded the experimental Benson & Hedges 100 (D6AYL) to be harsh. This tends to substantiate the directional tendency of the Combined Panel to indicate the experimental Benson & Hedges 100 cigarette (D6AYL) to be harsh.

Although not significantly different at the $p < .10$ level there is one tendency which could be noted: The Combined Panel rated the Control Benson & Hedges 100 (D6AYK) higher on the nine-point acceptability scale ($p < .12$).

Purpose: 10mg full flavor development.

Procedure: Paired comparison (see attached ballot for further information).

Panelists: A panel of 300 smokers recruited from the Va. Panel was used for this test. The panel consisted of (150) 100mm Marlboro and Benson & Hedges Smokers and (150) 100mm Health Filter Smokers.

Panelists who have switched to another cigarette type (not in the proposed panel for this test) were tabulated separately.

Cigarettes: Produced and packaged at R&D in Product Opinion Laboratory packs. Presentation was balanced using color codes.

	<u>Red</u>	<u>Black</u>
Control:		
Benson & Hedges 100mm (D6AYK)	Q9	S7
Experimental:		
10mg Benson & Hedges 100mm (D6AYL)	S7	Q9

KEY:

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MFS - 100mm Marlboro Smokers	N= 38
BHS - 100mm Benson & Hedges Smokers	N= 70
HFS - 100mm Health Filter Smokers	N= 85
RFS - 100mm Regular Filter Smokers	N= 28
TSW - Smokers who have switched cigarette type*	N= 5
CP - Combined Panel	N=226

*Because of the small sample size the smokers who have switched cigarette types have been omitted.

<u>RESULTS:</u>	<u>Control</u> <u>(D6AYK)</u>	<u>Experimental</u> <u>(D6AYL)</u>	<u>Both</u>	<u>Neither</u>	<u>Probability</u>
Which cigarette:					
Was too strong or too harsh?					
BHS	5	12	2	44	NS
HFS	10	13	7	52	NS
MFS	5	10	1	26	NS
RFS	4	5	1	17	NS
CP	24	43	11	140	NS
Had an off-taste to it?					
BHS	9	11	2	40	NS
HFS	20	22	8	34	NS
MFS	7	10	1	19	NS
RFS	6	7	0	14	NS
CP	43	52	11	109	NS
Had a rich tobacco taste?					
BHS	16	19	17	14	NS
HFS	21	16	11	35	NS
MFS	12	6	10	7	NS
RFS	10	5	4	7	NS
CP	60	47	42	65	NS
Was a bitter tasting cigarette?					
BHS	4	7	1	50	NS
HFS	9	18	3	53	NS
MFS	7	3	0	25	NS
RFS	4	3	1	18	NS
CP	24	33	5	153	NS
Was too weak a cigarette?					
BHS	11	3	4	45	NS
HFS	8	5	3	67	NS
MFS	4	6	0	25	NS
RFS	1	6	3	16	NS
CP	25	23	10	157	NS
Was a smooth smoking cigarette?					
BHS	19	19	20	7	NS
HFS	26	20	24	13	NS
MFS	11	7	13	5	NS
RFS	9	6	8	2	NS
CP	67	53	66	28	NS

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	<u>Control (D6AYK)</u>	<u>Experimental (D6AYL)</u>	<u>Probability</u>
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Which do you prefer?

BHS	35	31	NS
MFS	17	16	NS
HFS	43	38	NS
RFS	17	10	NS
CP	115	99	NS

Nine-point comparison with own brand scale
(1 = very much worse to 9= very much better)

Means

	<u>Control (D6AYK)</u>	<u>Experimental (D6AYL)</u>	<u>t-scores</u>	<u>Probability</u>
BHS	4.60	4.26	1.42	NS
HFS	4.04	3.93	0.54	NS
RFS	4.25	4.39	0.44	NS
MFS	4.45	4.24	0.75	NS
CP	4.34	4.14	1.58	p<.12

Undersirable Comments

	BHS		HFS		RFS		MFS		CP	
	<u>C</u>	<u>E</u>	<u>C</u>	<u>E</u>	<u>C</u>	<u>E</u>	<u>C</u>	<u>E</u>	<u>C</u>	<u>E</u>
Yes	20	33	40	40	10	12	12	17	83	107
No	50	37	45	45	18	16	26	21	143	120
Probability	p<.025		NS		NS		NS		p<.025	

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THINGS DISLIKED ABOUT THE TEST CIGARETTES

<u>TASTE</u>	<u>CONTROL (D6AYK)</u>				
	<u>MFS</u>	<u>BHS</u>	<u>HFS</u>	<u>RFS</u>	<u>TSW</u>
Poor flavor, disliked taste					
No true tobacco taste	1	2	5	1	-
Flavor too mild					
Not enough flavor	-	2	2	-	1
Flavor too strong	1	-	-	-	-
Left bad aftertaste	2	2	3	2	-
Hot, burning taste	-	1	1	1	-
Strange, peculiar taste	1	1	5	2	-
Dry taste	1	1	1	-	-
Bitter taste	2	1	3	2	-
Paper taste	-	-	1	-	-
<u>STRENGTH</u>					
Too mild	3	6	1	2	-
Too strong (Harsh), not mild enough	2	3	13	4	-
Varying cigarette strength	-	-	1	-	-
<u>DIFFICULTY IN SMOKING</u>					
Not easy drawing, didn't smoke well	1	2	3	1	-
<u>BURNING QUALITIES</u>					
Burned too fast	1	1	4	-	-
<u>EFFECT ON MOUTH, THROAT, ETC.</u>					
Irritated mouth and throat	1	-	-	-	-
Burned throat	-	1	-	-	-
Caused cough	-	-	1	-	-
<u>MISCELLANEOUS</u>					
Didn't like the Cigarette	-	-	3	-	-
Disliked everything about them	-	1	1	-	-
Not satisfying	-	3	1	1	-
Poor aroma	1	1	2	1	-
Disliked filters	1	-	3	-	-

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THINGS DISLIKED ABOUT THE TEST CIGARETTES

TASTE	EXPERIMENTAL (D6AYL)				
	MFS	BHS	HFS	RFS	TSW
Poor flavor, disliked taste					
No true tobacco taste	3	4	6	1	1
Flavor too mild					
Not enough flavor	-	3	3	1	-
Flavor too strong	-	1	-	-	-
Left bad aftertaste	1	4	4	2	-
Hot, burning taste	-	2	3	1	-
Strange, peculiar taste	2	1	3	-	1
Dry taste	-	1	2	-	-
Bitter taste	1	1	1	1	-
Paper taste	-	-	1	-	-
<u>STRENGTH</u>					
Too mild	3	2	2	2	-
Too strong (Harsh), not mild enough	5	10	11	5	1
Too strong at start of cigarette	1	-	-	-	-
<u>DIFFICULTY IN SMOKING</u>					
Not easy drawing, didn't smoke well	1	5	1	-	-
<u>BURNING QUALITIES</u>					
Burned too fast	3	2	1	3	-
Not even burning	-	-	-	1	-
Didn't stay lit	-	1	-	-	-
<u>EFFECT ON MOUTH, THROAT, ETC.</u>					
Irritated mouth and throat	-	1	1	-	-
Burned throat	-	3	-	-	1
Caused cough	-	-	1	-	-
Caused headache	1	-	-	-	-
<u>PHYSICAL CHARACTERISTICS</u>					
Too dry and stale	1	1	-	-	-
Too firmly packed	-	1	-	-	-
<u>MISCELLANEOUS</u>					
Didn't like the Cigarette	1	-	2	-	-
Disliked everything about them	-	1	1	-	-
Not satisfying	-	-	2	1	-
Not as good as other brands	1	-	-	-	-
Poor aroma	2	3	1	2	-
Disliked filter	-	-	3	1	-

1000364902

TO: Faye Reynolds ✓

DATE: December 2, 1976

FROM: J. E. Wickham

SUBJECT: Richmond Panel R-6542

Submitted By: Carol Chase

D6AYK = Red Q9 and Black S7 = Control Benson & Hedges 100 Cigarettes

D6AYL = Red S7 and Black Q9 = Experimental 10 mg Benson & Hedges 100 Cigarettes

The experimental 10 mg Benson & Hedges 100 cigarettes (D6AYL) were different from the control Benson & Hedges 100 cigarettes (D6AYK) in the following characteristics: tar and nicotine deliveries, puff count, filter efficiency, static burning time, filter weight, tipping paper length, filter dilution, tobacco weight, and rod density.

	<u>Control Benson & Hedges 100</u>	<u>Experimental 10 mg Benson & Hedges 100</u>
IBM Code	D6AYK	D6AYL
<u>Smoke</u>		
Butt Length, mm	35	38
FTC Tar, mg/cigt.	17.9	10.5
Nicotine, mg/cigt.	1.02	0.68
Puffs/cigt.	9.6	7.5
Filtration Eff., %	45	56
<u>Cigarette</u>		
Total RTD, in. of H ₂ O	5.2	5.1
Static Burn. Time, min.	7.4	6.0
Length, mm	99.3	99.6
Circumference, mm	24.9	24.8
<u>Paper</u>		
Additive, type	Cit.	Cit.
Porosity, sec.	16	14
<u>Filter</u>		
RTD, in. of H ₂ O	2.9	3.9
Length, mm	26.9	27.0
Weight, g	0.17	0.20
Tipping paper length, mm	32	35
Dilution, %	None	16
<u>Filler</u>		
Total alkaloids, %	1.58	1.67
Total reducing sugars, %	7.9	7.4
Wt. of tob., g	0.868	0.735
Rod Density, g/cc	0.243	0.207

JEW:gmm

cc: Dr. R. B. Seligman
Mr. F. E. Resnik
Mr. T. T. Goodale
Mr. R. N. Thomson
Dr. W. F. Gannon
Mr. J. S. Osmalov
Mr. F. L. Daylor
Mr. H. G. Daniel
Mr. L. F. Meyer
Mr. H. L. Spielberg
Mr. W. G. Houck
Ms. Carol Chase
Analytical File

Jewickham

1000364903

PHILIP MORRIS U. S. A.
INTER-OFFICE CORRESPONDENCE
RICHMOND, VIRGINIA

To: Jerry Osmalov

Date: October 6, 1976

From: Faye Reynolds

Charge No. 4010

Subject: Richmond Panel Test R-6542

Test Requester: Carol Chase

Approved by:

J. Meyer

Manager

Panel Makeup:

N=300 150 (100mm) Marlboro and Benson & Hedges Smokers
 150 (100mm) Health Filter Smokers

Presentation: Paired Comparison

Quantity:

Control

Red Q9 750 packs
Black S7 750 packs

Experimental

Red S7 750 packs
Black Q9 750 packs

CIGARETTES RECEIVED

NOV 29 1976

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Cigarette Descriptions:

Control - 100mm Benson & Hedges

Experimental - 100mm 10mg Benson & Hedges

fs

cc: R. Seligman
W. Gannon
R. Thomson
F. Daylor
L. Meyer

J. Wickham
H. Daniel
H. Spielberg
E. Chambers
W. Houck

J. Whitman
M. Johnston
J. Warren (3)
B. Rainey
C. Chase (Requester)

Faye Reynolds

(Make address changes on this label.)

PRODUCT OPINION LABORATORY
P. O. Box 26563 - Richmond, Va. 23261
Phone: (804) 271-3368

RETURN BALLOT BY

Dear Panelist:

R-6542

R

With this ballot I am sending you ten packs of cigarettes coded as follows:
Q9 - 5 packs and S7 - 5 packs. Remember, you do not have to smoke all of
the cigarettes - only as many as you need to complete the questionnaire.

When this questionnaire is completely filled out, please return it to me in
the enclosed postage-paid envelope. Thank you very much - your cooperation in
this test is most helpful.

D. F. Reynolds
Panel Leader

PLEASE READ ENTIRE BALLOT BEFORE STARTING TEST

First smoke some of the cigarettes marked Q9 and then the cigarettes
marked S7. Then compare the two cigarettes with each other and complete the
questions below.

- | Which cigarette: | Q9 | S7 | Both | Neither | | | | | | | | | | | | | | | | | | |
|--|--|------------------|----------------|---------|-----------------|-------------------|-------------|------------------|-------|-------|-------|-------|-------|-----------------|------------|------------------|----------------|------|-----------------|-------------------|-------------|------------------|
| 1. Was too strong or too harsh. | _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | |
| 2. Had an off-taste to it. | _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | |
| 3. Had a rich tobacco taste. | _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | |
| 4. Was a bitter tasting cigarette. | _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | |
| 5. Was too weak a cigarette. | _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | |
| 6. Was a smooth smoking cigarette. | _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | |
| 7. Which do you prefer? (choose one) | _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | |
| 8. Rate how you feel about the cigarette coded Q9 as compared with your own brand. | <table border="1"> <tr> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>very much worse</td> <td>much worse</td> <td>moderately worse</td> <td>slightly worse</td> <td>same</td> <td>slightly better</td> <td>moderately better</td> <td>much better</td> <td>very much better</td> </tr> </table> | | | | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | very much worse | much worse | moderately worse | slightly worse | same | slightly better | moderately better | much better | very much better |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | | | | | | | | | | | | | | |
| very much worse | much worse | moderately worse | slightly worse | same | slightly better | moderately better | much better | very much better | | | | | | | | | | | | | | |

9. Rate how you feel about the cigarette coded S7 as compared with your own brand.
- | | | | | | | | | |
|-----------------|------------|------------------|----------------|-------|-----------------|-------------------|-------------|------------------|
| _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| very much worse | much worse | moderately worse | slightly worse | same | slightly better | moderately better | much better | very much better |

10. Was there anything undesirable about Q9? Yes _____ No _____ If yes, what?
- _____
- _____

- Was there anything undesirable about S7? Yes _____ No _____ If yes, what?
- _____
- _____

What brand do you usually smoke? (Please be specific, e.g.,
Marlboro Lights, Winston Lights, Kool Milds, etc.)

BRAND: _____

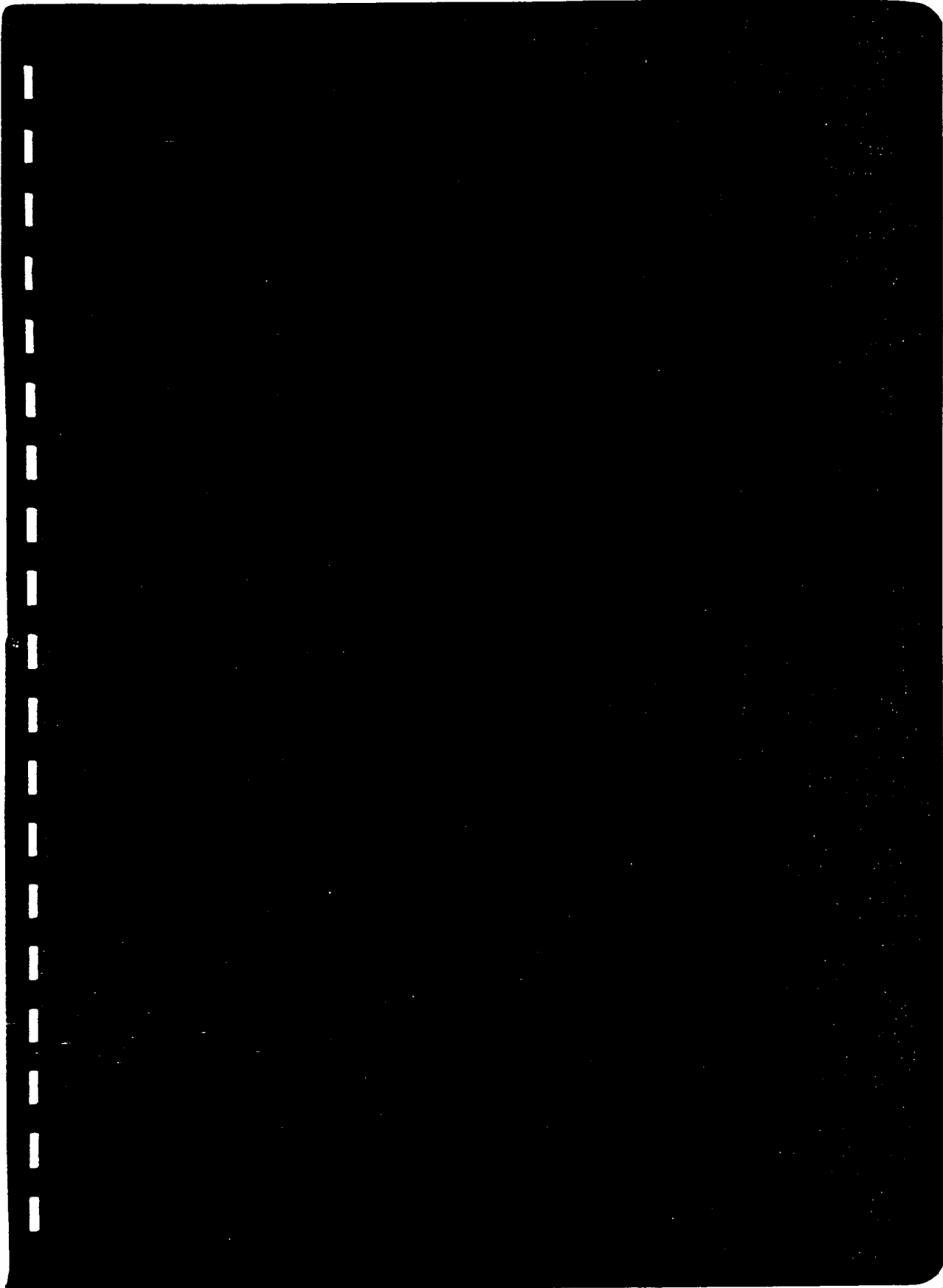
Is it filtered? Yes No (check one)

Is it menthol? Yes No (check one)

If it is filtered, is it King Size or Extra Long (100 mm)?

How many cigarettes do you smoke per day? _____

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