

Note for Tobacco
Strategy Review Team
2nd December 1991

Evaluation of reconstituted stems and the use of
Ammonia Technology in Virginia Products

Stem Reconstitution

The use of stem reconstitution is a means of utilising Burley stems and improving blend consistency has long been used in USB manufacture. Little work on stem reconstitution in Virginia products has been carried out in BAT. The first stage of a large study on this subject has now been completed.

A standard full-flavour Virginia product, State Express 555, was used. A normal control with 20% WTS (the standard cut stem component) was compared against two samples of 20% reconstituted stem inclusion (LTR sheet and stem DEER) and two samples of 10% reconstituted stem inclusion (again LTR sheet and DEER mixed with 10% WTS in each case.) All stem components were drawn from a common stem stock.

In physical terms, the reconstituted materials performed well giving acceptable fill-value characteristics as straight replacements for cut stem. At the high level of inclusion (20%) they also produced significant reduction in rod pressure drop (38 mm w.g. compared to 55 mm w.g. for cut stem). The rod pressure drop reduction led to a perceived reduction in 'draw effort' and greater 'mouthful of smoke'. However, at 20% inclusion levels the reconstituted sheet and to a lesser extent DEER, gave higher levels of irritation than the control. //

At the lower levels of 10% recon the reduction in rod pressure drop was insignificant compared to the control and irritation levels were similar to the control. //

A further set of nine samples has been manufactured varying the rod/filter p.d. ratios and these are currently being evaluated. It is hoped that recon inclusion will offer greater flexibility in cigarette design for Virginia products. The results of this second stage will be available in the first quarter of 1992.

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ROOT Technology in Virginia products

Previous studies on introducing ammonia technology into Virginia products clearly show that it shifts the smoke character towards the air cured style rather than enhancing natural Virginia character. Due to the increase in 'modified Virginia' blending, especially for low delivery products, this shift to air cured character could, if optimised, be a useful addition to the Blender/Product Developer's armoury. To this end a series of seven samples have been manufactured using a commercial Virginia product, Benson & Hedges Special Filter as a control, to compare ammonia technology with straight Burley addition as a route to confer air cured character. The samples are:

1. B&H SF Control
2. B&H SF with 6% Burley grades substituted for flue-cured lamina.
3. B&H SF with 12% Burley grades substituted for flue-cured lamina
4. B&H SF with 9% normal CPCL9 substituted for cut stem
5. B&H SF with 9% flue cured CPCL9 substituted for cut stem
6. B&H SF with 9% flue cured ammoniated DEER substituted for cut stem.
7. B&H SF with cut stem treated with EMERGE to give similar levels of ammonia as in samples (4) to (6).

These samples are currently undergoing full physical, chemical and sensory analysis which will be completed by the end of 1991. This study will give a comparison of the relative merits (both sensorily and commercially) of air cured modification of Virginia products using Burley leaf and ammonia treated reconstituted routes.

ALH/to
11th November 1991
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