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LABORATORY

CHEMICAL DEPARTMENT
CINCINNATI

WORK REQUEST NO. NC-6-73

DATE September 17, 1973

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SUBJECT MONASTRAL® BLUE G, BT-476-D IN CHLORESINOUS INK

INTRODUCTION:

As written in the first report (4/30/73) we found experimental semi-works BT-476-D SW-00476 more dispersible than Ciba-Geigy's LGLD in Cowles dispersibility in a heatset ink. This report covers Cowles dispersibility of plant produced BT-476-D, lab finished BT-476-D samples and experimental samples submitted by Ken Eetzer, Newark.

CONCLUSION & SUMMARY:

BT-476-D production is not satisfactory Cowles dispersible material. It is inferior in dispersibility to semi-works BT-476-D and LGLD. Five production lots tested all had considerable tailings, some separation and poor texture after one canning pass (medium tight setting) over the three-roll mill.

Lab finished samples 1934-53A and 1934-53B were Cowles dispersible and very very slightly superior ~~to LGLD in dispersion~~. These samples are 1st extraction of Newport presscake XOP-428 later sent to Newark and finished as lot 42229. 1934-53A represents five hour milling which is considered satisfactory milling time; tinctorially 1934-53A is closer to S.W. BT-476-D. Six hour milling, however, gives darker masstone and additional tinting strength and should be under future consideration.

LAB WORK BY: G. W. Rodgers

SIGNED J. A. Mackiewicz

J. A. MACKIEWICZ/gs

CONCLUSIONS [illegible] (Cont'd.)

LGLD can be dispersed satisfactorily with a short pre-mix and one canning pass over the three-roll mill; it is not necessary to be pre-dispersed on the Cowles. By this test BT-476-D SF-00476 and BT-4[illegible]3-D are inferior but lab finished samples 1934-55B is equal to LGLD in texture

Experimental samples submitted by Ken [illegible] are not satisfactory BT-476-D dispersion quality.

We will hold this work request open to test future plant BT-476-D production and laboratory finsihed samples.

EXPERIMENTAL DETAILS:

Pigments Tested

See Table III for listing

Ink Preparation

Cowles-dispersed heatset ink made per TF-2302.
LGLD was ground at 20.66% pigment and most BT-476-D samples were ground at 27.80% pigment (considered optimum pigment loading).

Change can pre-mix test - Pigments were ground 20.66% one canning (medium tight mill setting) pass over the mill. The millbase was pre-mixed on the Kent change can mixer for ten minutes prior to passing over the mill.

REFERENCES:

NC-6-73
ILF-30-73

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TABLE I: [illegible](1)

Pigment	[illegible](2)
LGLD	2.5(3)
BT-476-D S.W.00476	10
BT-473-D TS-96356	10
1934-53-B	2

(1) After the pigment is pre-mixed it is given one medium tight pass over the three-roll mill.

(2) NPIRI Texture, 0-10 scale, 0 = perfect

(3) Average of two tests

TABLE II: TINCTORIAL COMPARISONS
(All readings versus S.W.00476)

	Masstone	Tint
1934-53A (5 hr. grind)	vvs lt., bronzy	=
L-42265 (6 hr. grind)	dark, less bronzy	approx. 2.5% strong

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9/17/73

MC-6-73