

PROGRESS REPORT ORGANIC CHEMICALS DIVISION St. Louis Research Department

Job No. 117-2602
Report No. (6)

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Date: Dec. 31, 1953

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At St. Louis	At St. Louis	At WGK Plant	
1 Library	13 R.O. Nellums	25-29 G.R. Russell	35- H. L. Hubbard
1a Library	14 O.J. Weinkauff	30 Development	36- R. L. Jenkins
2 D.M. Campbell	15 J.R. Wilson	At J.F.Q. Plant	37-
3 H.W. Faust	16 F.B. Zienty		38-
4 L.L. Fellinger	17 O. DeGarmo	31-	39- FILE NO. 246.640.1
5 H.R. Gamrath	18 J.F.Q. Development		40- TECHNICAL SERVICES
6 R.M. Hitchens	19 J.R. Durland	At Nitro	41- CHEMICAL ENGINEERING DEPT.
7 C.A. Hochwalt	20 R. M. Morris	32-W.P. Metzner	42- PERMANENT ☒
8 R.E. Howard	21 J. H. Lum	At Dayton	43- DESTROY AFTER MONTHS.
9 D. S. Weddell	22 P.G. Marsh	33 L. Lederman	44- SEE ALSO
10 R.H. Munch	23 J. L. Hammer	34 N.N.T. Samaras	45-
11 F.M. Murdock	24 B.E. Thomas		46-
12 H.K. Nason			47-
			48-
			49-

Title: AROCHLOR PROCESS INVESTIGATION

Problem: Infrared comparison of Anniston and WGK Arochlor 1260.

Summary: Arochlor 1260 is being produced at both the WGK plant and at Anniston. The products from the two plants are being compared to determine how closely identical they are. As part of the comparison the infrared spectra of eight samples of the WGK product and six from Anniston were recorded.

Of the fourteen spectra obtained no two are identical, but they are very similar. The Anniston samples show a greater variability. Tabulated below are the ranges of variation of optical density at certain wavelengths. The wavelengths were chosen because the WGK samples showed their greatest variation at 9.74 and 13.54 microns and the Anniston samples were most variable at 13.28 microns.

Wavelength	9.74	13.54	13.28 microns
WGK range	0.278-0.300	0.262-0.280	0.141-0.150
WGK variation	0.022	0.018	0.009
Anniston range	0.257-0.281	0.287-0.304	0.146-0.185
Anniston variation	0.024	0.017	0.039

Certain differences appear to be typical of each group. The 13.07 micron band is less intense in the Anniston group. The WGK spectra show a doublet of about equal intensity at 13.48 and 13.53 microns, but the Anniston group shows greater absorption at 13.53 than at 13.48 microns.

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