

alcohol, however, gave pure *s*-bis(*o*-carboxyphenyl)ethane (V), melting at 226–228°. It formed in clusters of delicate feather-like needles. Analysis showed that the compound contained no nitrogen.

Anal. Calcd. for $C_{16}H_{14}O_4$: C, 71.7; H, 5.2. Found: C, 71.2; H, 5.5.

The other reaction product was not isolated but was presumably the intermediate compound, 1-*o*-amidophenyl-2-*o*-carboxyphenylethane.

Summary

The coupling action of the Grignard reagent on certain *o*- and *p*-cyanobenzyl halides has been studied.

The *p*-cyanobenzyl halides yielded amorphous substances which contained halogen but no nitrogen.

The *o*-cyanobenzyl halides gave approximately 40% yields of the coupling product, *s*-bis(*o*-cyanophenyl)ethane, showing that in these cases the coupling reaction takes precedence over other possible reactions.

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NOTES

Dyes from the Alkaloids of Ipecacuanha.—From the fact that the non-phenolic alkaloids of ipecacuanha couple with *p*-nitrodiazobenzene, whereas emetine does not, Palkin and Wales¹ deduce that emetamine does so, and publish curves showing the absorption spectra of the supposed *p*-nitrobenzene-azo-emetamine. Their deduction is incorrect. Experiments with the pure alkaloids show that neither emetine nor *O*-methylpsychotrine nor emetamine couples with *p*-nitro diazobenzene, but psychotrine does so, the dye giving a purple solution in aqueous sodium hydroxide similar to that given by the dye from cephaeline. Incidentally, I have nowhere stated that "emetamine is probably an amine," and perusal of my paper² will show that I regard emetamine as a ditertiary base and psychotrine as a secondary-tertiary base.

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Dyes from the Alkaloids of Ipecacuanha. A Reply.—Professor Pyman's experiments with pure emetamine prove that our assumption regarding the identity of the constituent of the non-phenolic fraction of ipecac alkaloids which forms an azo dye is untenable. It would seem, therefore, that ipecac contains a hitherto undetected alkaloid which either

¹ Palkin and Wales, *THIS JOURNAL*, **47**, 2005 (1925).

² Pyman, *J. Chem. Soc.*, 111, 419 (1917).