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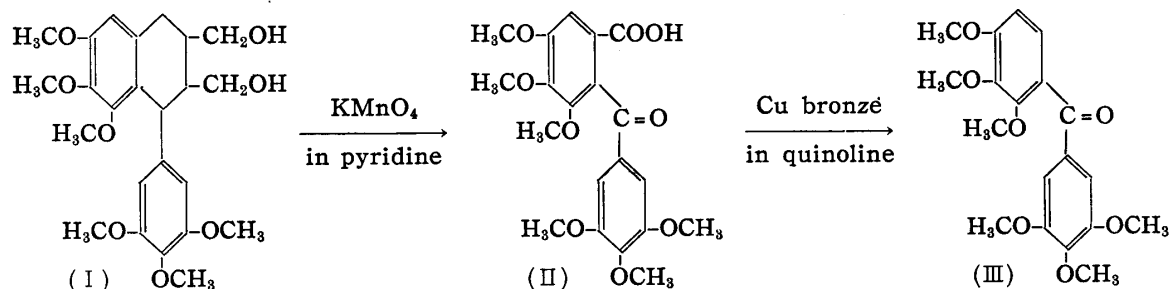
### Decarboxylation of the Permanganate Oxidation Product of Lyoniresinol Dimethyl Ether

In a previous paper<sup>1)</sup> it was reported that lyoniresinol dimethyl ether (I) gave a carboxylic acid (II),  $C_{20}H_{22}O_9 \cdot 2\frac{1}{2}H_2O$ , m.p.  $186.7\sim 187^\circ$ ,\* by oxidation with potassium permanganate in pyridine and that the molecular formula of (II) agreed with that of galloylgallic acid hexamethyl ether.

A neutral substance (III), m.p.  $129.8\sim 130^\circ$  (*Anal.* Calcd. for  $C_{19}H_{22}O_7$ : C, 62.97; H, 6.12; O, 30.91. Found: C, 62.71; H, 6.20; O, 31.14. IR  $\nu_{CO}^{KBr}$   $1660\text{ cm}^{-1}$ ), was obtained from (II) by decarboxylation with copper bronze in quinoline and the substance (III) was confirmed as 2,3,4,3',4',5'-hexamethoxybenzophenone by comparison with an authentic sample, m.p.  $129.9^\circ$  (*Anal.* Calcd. for  $C_{19}H_{22}O_7$ : C, 62.97; H, 6.12; O, 30.91. Found: C, 62.78; H, 6.25; O, 30.80. IR  $\nu_{CO}^{KBr}$   $1660\text{ cm}^{-1}$ ), by elemental analysis, mixed melting point determination, and from infrared absorption spectra.

The authentic sample of 2,3,4,3',4',5'-hexamethoxybenzophenone<sup>2)</sup> was prepared by methylation of the condensation product (2-hydroxy-3,4,3',4',5'-pentamethoxybenzophenone) of pyrogallol trimethyl ether and galloyl chloride trimethyl ether.

Thus, it was proved that the two trimethylpyrogallol rings were joined to one another with one carbon atom between them.



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\* All m.p.s were determined by micro-method and are uncorrected.

1) M. Yasue, Y. Kato: *Yakugaku Zasshi*, **80**, 1013(1960).

2) W.H. Perkin, C. Weizmann: *J. Chem. Soc.*, **89**, 1665(1906).