

ABSTRACTS OF PAPERS PUBLISHED IN OTHER JOURNALS

CHEMISTRY

ANALYTICAL

***m*- and *p*-Cresol in their Mixtures, Colorimetric Analysis of.** S. A. Savitt, A. M. Goldberg, and D. Othmer. (*Anal., Chem.*, 1949, **21**, 516.) The method used was based on the production of coloured nitroso-phenols. The cresols were dissolved in a potassium hydroxide-glacial acetic acid buffer solution, and sulphuric acid followed by sodium nitrite solution was added. After standing, alcoholic ammonium hydroxide was added, the solution allowed to stand overnight, and the colour read photoelectrically using a violet light filter (492 m μ). Standard curves of the colour transmissions of the nitroso-solutions are given together with the calibration curves, for known concentrations of *m*- and *p*-cresol and their mixtures. The rate of absorption of water by the cresols in the atmosphere was determined and a graph is given for *m*- and *p*-cresols; it was concluded that the small amount of water absorbed over the initial 15 minutes of exposure would have no effect on the precision and accuracy of the analytical procedure. Numerous unknown samples were analysed and gave results which were reproducible to within 1 per cent. If phenol or *o*-cresol were present, it was found to be necessary to remove it by an efficient distillation and rectification prior to analysis for the binary mixture itself. R. E. S.

Iron, Volumetric Determination of. W. D. Cooke, F. Hazel and W. M. McNabb. (*Anal. chem.*, 1949, **21**, 643.) Solutions of ferric salts, acidified with either sulphuric or hydrochloric acid, were reduced by treating with liquid zinc amalgam. After separation of the amalgam, the residual ferric ion was reduced by the addition of a few drops of chromous chloride solution, the chromous ion reactions being followed by a low potential redox indicator, phenosafranine (oxidation-reduction potential, -0.28 volt). Complete reduction of the ferric ion was indicated by the colour change of the indicator from pink (oxidised form) to colourless, while the reverse colour change indicated complete oxidation of the excess chromous ion by atmospheric oxygen. No evidence of oxidation of ferrous iron by air was observed under the conditions of the experiment, thus eliminating the necessity of maintaining an inert atmosphere during liquid zinc amalgam reductions. In the actual titration of a ferric salt liquid amalgam was added followed by sulphuric or hydrochloric acids. After 1 minute carbon tetrachloride was added, the amalgam was removed (the reactions being carried out in a separating funnel), 2 drops of phenosafranine indicator were added followed by chromous chloride (usually 4 to 5 drops) until the pink colour of the indicator disappears and a clear green tint was visible; at this stage the solution was swirled until the pink colour reappeared. Phosphoric acid and diphenylamine sulphonate were then added and the titration was completed with standard potassium dichromate solution. An indicator correction was found to be necessary. R. E. S.

Lævulose, Determination of. D. T. Englis and J. E. Miles. (*Anal. chem.* 1949, **21**, 583.) The fact that lævulose was found to produce consider-