Man könnte einwenden, daß die gefundenen Werte vielleicht nicht auf eine Lösung von 25° C zutreffen, weil durch die Heizung im Einspritzblock oder in der Säule die Kondensation begünstigt wurde und kondensierte Polymere gefunden worden wären, die bei Zimmertemperatur nicht vorhanden sind. Da jedoch die Anwesenheit der polymerisierten Komponenten nicht immer sichtbar war (auch wenn die den einfacheren Komponenten entsprechenden Peaks vorhanden waren) und da die Heizung im Einspritzblock und in der Säule nur kurze Zeit einwirkte (man weiß [4], daß für die Polymerisation ein Erhitzen von ungefähr 10 h nötig ist), kann man annehmen, daß die sichtbaren Komponenten auch bei Zimmertemperatur vorhanden sind.

Literatur

1. Desty, D. H., Haresnape, J., Whyman, B. H. F.: Anal. Chem. **32**, 302 (1960).
2. Eder, R., Kutter, F.: Helv. Chim. Acta **9**, 355—571 (1926).
3. Goretti, G., Liberti, A.: J. Chromatog. **61**, 334 (1971).
4. Grignard, V., Dupont, G., Locquin, R.: Traité de Chimie Organique, Vol. XI, p. 132. Bd. I; Paris: Masson 1945.

Prof. Dr. E. Bottari
Istituto di Chim. Analit.
Città Universitaria
I-00185 Roma
Italien

Kurze Mitteilungen

Volumetric Determination of Xanthates with EDTA

Volumetrische Bestimmung von Xanthaten mit ÄDTA

A. L. J. Rao and Surinder Singh
Department of Chemistry,
Punjabi University, Patiala, India

Received April 10, 1972

Xanthates (ethyl or butyl) have been determined volumetrically by adding an excess of copper sulphate and determining the excess by titrating with EDTA in the presence of pyrocatechol violet buffered with pyridine as indicator. This indicator has already been used in the titration of copper with EDTA.

Procedure. To an aliquot of 40—60 ml solution containing 1.5 to 6.0 mg of xanthate, an excess of 0.005 M copper sulphate, 2—3 drops of pyrocatechol violet indicator (0.1%) and two drops of pyridine are added (pH 7). The excess of copper sulphate is titrated with 0.005 M EDTA to a sharp colour change from green to yellow. The titration is carried out slowly near the end point.

Blank titrations using the same amount of copper sulphate are performed to find out the volume reacted with xanthate.

Discussion. When copper sulphate is added to xanthate solution copper is precipitated as cuprous xanthate. The use of copper ion for precipitation of xanthate has advantage over nickel used earlier [2] in complexometric determinations. Trial colorimetric experiments [3] have revealed that if EDTA is added to extracts of copper and nickel xanthate in ethyl acetate in the concentration range of 0.1 to 1.0 mg, the colour of nickel xanthate fades while that of copper xanthate remains unaffected, indicating that EDTA does not react with the copper of copper xanthate. Hence the removal of precipitate by filtration is not necessary.

The range is considerably low as compared to the direct titration of xanthates with copper sulphate [1] or mercurimetric method, the end point is quite sharp and results are quite accurate. 2—7 mg of ethyl or butyl xanthate have been determined with errors of $\leq 0.7\%$.

References

1. Karaivanov, S. T., Magaeva, S. N., Kuekimova, A.: Nauchn. Tr. Vissh. Pedagag. Inst. Plovdiv. Mat. Fis. Khim. Biol. **5** (31), 99 (1967); cf. Chem. Abstr. **69**, 41062 (1968).
2. Kekedy, L., Makkay, F.: Stud. Univ. Babes Bolyai Ser. Chem. No. 139—144 (1962); cf. Chem. Abstr. **61**, 2471g (1964).
3. Rao, A. L. J., Singh, S.: Unpublished results.

Dr. A. L. J. Rao
Dept. Inorg. Chem.
Punjabi University
Patiala, India

Ferron as Catalyst and Indicator in the Cerimetric Titration of Arsenic(III)

Ferron als Katalysator und Indicator bei der cerimetrischen Titration von Arsen(III)

N. Venkateswara Rao, B. Subrahmanyam, and B. Seshagiri Rao*
Chemistry Department, Andhra University, Waltair, India

Received March 22, 1972

The catalysts that are generally employed in the cerimetric titration of arsenic(III) are: osmic acid

* Present address: National Chemical Laboratory, Poona (India).