Bemerkungen zur Veröffentlichung „Dithio-oxamide as a colorimetric reagent in the detection of metal ions"

J. prakt. Chem. 6, 62 (1958)

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Of the 38 inorganic salts the reactions of which in acidic, neutral and alkaline media have been reported by the authors only give positive tests, namely Cu^{+2}, Ni^{+2}, Co^{+2}, Zr^{+4} and $Cr_2O_7^{-2}$. Of these the reactions of the first three (Cu^{+2}, Ni^{+2} and Co^{+2}) are no new observations as these were described as early as 1926 [P. RAY, Z. analyt. Chem. **79**, 94, (1929)]; the high sensitivity of these tests are also apparent from the identification limits given therein (cf. F. FEIGL, Qualitative analysis by spot tests, 3rd English ed., pp. 71, 112, 118, Elsevier Publishing Co., Inc., New York, 1947). Hence, the only new data in this communication are the color reactions with Zr^{+4} and $Cr_2O_7^{-2}$. However, their claim that chelates are formed in these cases (vide the abstract in the paper) is untenable. In all probability in alkaline medium $Zr(OH)_4$ forms an adsorption complex with rubeanic acid and in acid medium $Cr_2O_7^{-2}$ gives an oxidation product of the reagent. Further, their several observations are in disagreement with what has been described elsewhere (F. J. WELCHER, Organic analytical reagents, vol. IV, pp. 148–154, D. VAN NOSTRAND Co., Inc., New York, 1948), particularly for Bi^{+3} and Au^{+3}. In this book one can also get a number of other references on the reactions of Pt, Pd, Ru, etc. with the reagent under consideration which might have escaped the authors' notice. May I further point out that it has just been futile on the part of these authors to search for any reaction of salts like LiCl, $CaCl_2$, $MgCl_2$, $SrCl_2$, $BaCl_2$ etc. with an organic reagent of this type. The authors have further pointed out that in future communications they will decribe the colorimetric determinations of metals with this reagent. However, several such investigations have already been reported.

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Bei der Redaktion eingegangen am 5. Dezember 1960.