

mediate into tetracyclines and the failure to introduce methyl groups into resacetophenone for the formation of clavatul in *Aspergillus clavatus*.⁷ Recently Steward and Packter⁸ reported similar conclusions from their studies on gliorosein formation in *Gliocladium roseum*.

This investigation has been supported by a research grant from the *Swedish Natural Science Research Council*.

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Received February 4, 1969.

Corrigendum to
 "4-Methylsulphonylbutyl-
 glucosinolate Ion, the Natural
 Thioglucoside Precursor of
 Erysolin"*

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Through a regrettable oversight, formula (II), p. 2875 is erroneously drawn: the hydroxy-substituents at C-2, C-3, and C-4 in the pyranose-ring should be reversed.

Received March 24, 1969.

* *Acta Chem. Scand.* **22** (1968) 2875.

Hydrothermal Preparation of Tellurium Compounds

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The tellurates M_3TeO_6 containing the metals Cu, Zn, and Hg, the silver tellurate, Ag_6TeO_6 , and the lead tellurate, $Pb_2H_2TeO_6$, were prepared by Jander and Kienbaum¹ using precipitation from aqueous solutions. The precipitation of the compounds is mostly initiated by the formation of amorphous tellurates of varying compositions, which on aging yielded crystalline products. The tellurates M_3TeO_6 containing the metals Mg, Mn, Ni, and Cu were prepared by Bayer² using solid-state reactions from corresponding reagent-grade oxides. The tellurates M_2TeO_6 of Sc, In, Y, and the rare-earth elements were prepared by Natansohn³ by reacting the sesquioxides and orthotelluric acid at elevated temperatures.

Strontium tellurite, $SrTeO_3 \cdot H_2O$, was prepared by Ivankova, Samplavskaya, and Karapet'yants⁴ by precipitating a sodium tellurite solution with a strontium nitrate solution. The product obtained showed an endothermic effect in the temperature range 250–400°C, associated with the loss of water.

Only a limited number of tellurium compounds have been prepared by using hydrothermal technique. Compounds of the composition $MTeO_2(OH)_3$ and $MTeO_3OH$ containing K and Rb were hydrothermally prepared by Lammers.⁵ Two modifications of tellurium oxide, TeO_3 , and polymeta-telluric acid $(TeO_3 \cdot H_2O)_n$ were prepared by Maurin and Moret⁶ using hydrothermal technique.

We wish to report the hydrothermal synthesis of the tellurium compounds listed in Table 1.

Expts. Nos. 1–5. A solution of 0.01 M orthotelluric acid and solutions of 0.03 M of the respective metal ions were used. 20 ml of the metal ion solution was mixed with 20 ml of the orthotelluric acid solution in a silver ampoule and the precipitate was heated with the mother liquid in a 100 ml pressure bomb, as indicated in Table 1. The crystalline prod-

Table 1. Experimental conditions for hydrothermal preparation of tellurium compounds.

Expt. No.	Compound	Temp. °C	Pressure atm.	Time h	Powder pattern, Ref.
1	Cu ₃ TeO ₆	300	75	24	2
2	Zn ₃ TeO ₆	180	10	24	1
3	Hg ₃ TeO ₆	180	10	24	1
4	Mn ₃ TeO ₆	300	80	24	2
5	Pb ₂ H ₂ TeO ₆	300	80	60	1
6	In ₂ TeO ₆	505	3400	73	3
7	Y ₂ TeO ₆	537	2650	96	3
8	Nd ₂ TeO ₆	500	2900	66	3
9	Eu ₂ TeO ₆	535	2650	96	3
10	Ho ₂ TeO ₆	485	3000	66	3
11	SrTeO ₃ ·H ₂ O	180	10	40	

ucts were washed with water, dried at 100°C, and the X-ray powder patterns were obtained with a de Wolff-Guinier camera.

Expts. Nos. 6–10. Sealed gold tubes with a volume of 2 ml and 7 ml pressure bombs were used. In a typical preparation the reaction of 0.1 g of a metal sesquioxide-orthotelluric acid mixture in a 1:1 mole ratio in 0.7 ml of water yielded the orthotellurate at the experimental conditions listed in Table 1. In the experiments Nos. 6 and 9, crystalline In(OH)₃ and EuOOH were used and the metal compound-orthotelluric acid mole ratio was 2:1. The crystalline products were treated and the powder patterns were recorded as described for Expts. Nos. 1–5. The compounds prepared in Expts. Nos. 1–10 were all identified by the X-ray powder patterns.

Expt. No. 11. 20 ml of a 20 % strontium nitrate solution was mixed with 20 ml of a 10 % sodium tellurite solution in a silver ampoule and the precipitate was heated with the mother liquid in a 100 ml pressure bomb as indicated in Table 1. The crystalline product was washed with water and dried at 25°C. The DTA diagram was obtained with a Du Pont 900 Differential Thermal Analyzer over the temperature range from 25°C to 500°C using a heating rate of 20°C/min. A phase transformation was observed at 345°C. This is in agreement with the results reported in Ref. 4. The loss of weight on heating to 450°C for 6 h was determined. (Found: loss (H₂O) 5.4. Calc. for SrTeO₃·H₂O: H₂O 6.4). The infrared spectrum was recorded over the frequency range 300–4000 cm⁻¹ on a Beckman IR10 spectrophotometer using a pellet of a mixture of 3 mg sample in 300 mg CsI. The infrared spectrum had a broad band from 2700 cm⁻¹

to 3600 cm⁻¹ characteristic for a water containing compound. The Guinier powder pattern of the sample and of SrTeO₃·H₂O precipitated as reported in Ref. 4 were identical.

The investigation shows that amorphous and ultramicrocrystalline tellurium compounds can be converted to crystalline compounds using hydrothermal technique and that tellurates can be prepared at temperatures much lower than the temperatures necessary for solid-state reactions.

Acknowledgements. We are indebted to Professor S. Brodersen of the Department of Chemical Physics, Aarhus University, for the use of the spectrophotometer, to Professor L. T. Muus of the Department of Physical Chemistry, Aarhus University, for the use of the DTA equipment, and to Professor S. E. Rasmussen for his interest in this work.

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Received January 31, 1969.