| COMPONENTS: | ORIGINAL MEASUREMENTS: |
|---|---|
| (1) Mercury(II) oxide; HgO; [21908-53-2]<br>(2) Baltic Sea water<br>(3) Water; $H_2O$; [7732-18-5] | Ragg, M. *Farbe u. Lack* 1950, *56*, 435-41 |
| **VARIABLES:** | **PREPARED BY:** |
| Solvent composition at 18°C and pH = 8.3-8.5 | T. P. Dirkse |

**EXPERIMENTAL VALUES:**

Solubility of HgO at 18°C[b]

| | distilled water | | Baltic Sea water | |
|---|---|---|---|---|
| | g HgO $dm^{-3}$ | mol HgO $dm^{-3}$[a] | g HgO $dm^{-3}$ | mol HgO $dm^{-3}$[a] |
| yellow HgO | 0.0500 | $2.3 \times 10^{-4}$ | 0.2188 | $1.0 \times 10^{-3}$ |
| red HgO | 0.0515 | $2.4 \times 10^{-4}$ | 0.1881 | $8.7 \times 10^{-4}$ |

[a] calculated by compiler

[b] There is a question about the reliability of the values in this Table because later in this article, Table 1 gives a summary of all the experimental results and there the following values are given.

| Compound | solubility in mg $dm^{-3}$ | |
|---|---|---|
| | distilled water | Baltic Sea water |
| red HgO | 51.5 | 219 |
| yellow HgO | 52.0 | 288 |

Nowhere in the article is this discrepancy discussed.

AUXILIARY INFORMATION

**METHOD/APPARATUS/PROCEDURE:**
Both yellow and red HgO were used. 0.5 g of the HgO was added to 1 liter of solvent and the mixture was shaken for 48 hours at 18°C. The mixture was then filtered and the filtrate was analyzed for mercury content by adding $H_2S$ and weighing the HgS that was formed.

**SOURCE AND PURITY OF MATERIALS:**
Distilled water and filtered Baltic Sea water were used as solvents.

**ESTIMATED ERROR:** No information is given about reproducibility of temperature control or any of the procedures. Furthermore, the data given in the body of the report do not agree with those given in a summarizing Table.

**REFERENCES:**