### Components:

1. Europium bromide; EuBr₃; [13759-88-1]
2. Tetrahydrofuran; C₄H₈O; [109-99-9]

### Original Measurements:

Rossmanith, K.

Monatsh. Chem. 1966, 97, 1357-64.

### Variables:

Room Temperature: \( T/K = 294-296 \)

### Prepared By:

T. Mioduski

### Experimental Values:

The solubility of EuBr₃ in tetrahydrofuran at 21-23°C was reported to be

\[ 0.45 \text{ g per 100 ml of solution (0.0115 mol dm}^{-3}, \text{ compiler).} \]

### Auxiliary Information

**Method/Apparatus/Procedure:**

Isothermal method employed. The solution was equilibrated in an extractor with agitation for 60-80 hours at room temperature.

Europium was determined by the oxalate method and by titration with EDTA using Xylenol Orange indicator. The solvent was determined by difference.

Anhydrous materials were handled in a dry box through which was passed a stream of nitrogen free of carbon dioxide.

The solid phase is EuBr₃·3.5C₄H₈O.

**Source and Purity of Materials:**

Sources and purities of initial materials not specified. EuBr₃ was prepared by conversion of the oxide by high temperature reaction with an excess of NH₄Br followed by heating the product in a stream of dry nitrogen, and then in vacuum to remove unreacted NH₄Br.

Tetrahydrofuran was distilled from LiAlH₄.

**Estimated Error:**

Nothing specified.

**References:**
### COMPONENTS:
1. Europium bromide; EuBr₃; [13759-88-1]
2. Alkyl amines

### ORIGINAL MEASUREMENTS:
Kirmse, E.M.

### VARIABLES:
T/K = 298

### EXPERIMENTAL VALUES:

<table>
<thead>
<tr>
<th>solvent</th>
<th>mass %</th>
<th>mol kg⁻¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-C₃H₇N; [107-10-8]</td>
<td>11.0</td>
<td>0.316</td>
</tr>
<tr>
<td>iso-C₃H₇N; [75-31-0]</td>
<td>0.08</td>
<td>0.0020</td>
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<tr>
<td>sec-C₄H₁¹N; [13952-84-6]</td>
<td>0.11</td>
<td>0.0028</td>
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</tbody>
</table>

*Solubility calculated by the compilers.

### AUXILIARY INFORMATION

**METHOD/APPARATUS/PROCEDURE:**
Experimental details not given, but were probably similar to previous works of the author which are compiled throughout this volume.

Nature of solid phases not specified.

**SOURCE AND PURITY OF MATERIALS:**
Nothing specified, but based on previous work by the author, the anhydrous salt was probably prepared by the method of Taylor and Carter (1).

**ESTIMATED ERROR:**
Nothing specified.

**REFERENCES:**
1. Taylor, M.D.; Carter, C.P.