

## Certificate of Analysis

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Product Name: Thulium trichloride  
Cat. No.: GB61598  
Batch No.: 1  
Chemical Name:

### PHYSICAL AND CHEMICAL PROPERTIES

Cas. No.: 1331-74-4  
Molecular Formula: ClTm  
Molecular Weight: 204.39  
Storage: Store at room temperature, keep dry and cool

Chemical Structure:



### ANALYTICAL DATA

Appearance: A solid  
HNMR: Consistent with structure  
HPLC: Consistent with structure  
Purity: >99.00%  
CeO<sub>2</sub>: 1 ppm  
La<sub>2</sub>O<sub>3</sub>: 1 ppm  
Pr<sub>6</sub>O<sub>11</sub>: 1 ppm  
Nd<sub>2</sub>O<sub>3</sub>: 1 ppm  
Sm<sub>2</sub>O<sub>3</sub>: 3 ppm  
Er<sub>2</sub>O<sub>3</sub>: 10 ppm

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

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### ANALYTICAL DATA

Yb <sub>2</sub> O <sub>3</sub> :	10 ppm
Fe <sub>2</sub> O <sub>3</sub> :	5 ppm
SO <sub>4</sub> 2:	50 ppm
CL:	50 ppm
PO <sub>4</sub> <sup>3-</sup> :	5 ppm
CaO:	10 ppm
PbO:	10 ppm
Conclusion:	The product has been tested and complies with the given specifications.

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