

(Garuda)

Certificate No. 20T166/1144

**Certificate of Laboratory Accreditation**  
by Virtue of National Standardization Act B.E. 2551 (2008)  
Secretary-General, Thai Industrial Standards Institute

Issues this Certificate to

TANIOBIS Co., Ltd.

Laboratory address :

5, I-3A Road, Map Ta Phut, Muang Rayong, Rayong

This laboratory is accredited for testing  
in accordance with the Thai Industrial Standard TIS 17025-2548 (2005) (ISO/IEC 17025:2005)  
General requirements for the competence of testing and calibration laboratories

**Accreditation No. TESTING 0106**

The scope of accreditation is as annexed hereto.

Valid from 31<sup>st</sup> August B.E. 2563 (2020)

Valid until 12<sup>th</sup> July B.E. 2564 (2021)

Issue date 14<sup>th</sup> September B.E. 2563 (2020)

Translation approved



(Mr. Ekanit Romyanon)

Director

Office of the National Standardization Council

Date 6<sup>th</sup> November 2020

(Signature)

(Mr. Verakit Rantakittanawat)

Deputy Secretary - General

For Secretary - General

Thai Industrial Standards Institute

Ministry of Industry, Thai Industrial Standards Institute

Translation Note: In the event of doubt or misunderstanding, the original in Thai shall be the authoritative.



## Scope of Accreditation for Testing

Certificate No. 20T166/1144

Laboratory Name      TANIOBIS Co., Ltd.

Address                      5, I-3A Road, Map Ta Phut, Muang Rayong, Rayong

Accreditation No.      Testing 0106

Laboratory Status       Permanent               Site               Temporary               Mobile

Field of Testing	Parameter	Test Method
Chemical field		
1. Tantalum powder	<ul style="list-style-type: none"> <li>- Iron 3 ppm to 500 ppm</li> <li>- Nickle 7 ppm to 500 ppm</li> <li>- Chromium 2 ppm to 500 ppm</li> <li>- Niobium 3 ppm to 500 ppm</li> <li>- Titanium 2 ppm to 500 ppm</li> <li>- Magnesium 2 ppm to 100 ppm</li> <li>- Calcium 2 ppm to 100 ppm</li> <li>- Oxygen 500 ppm to 3 300 ppm</li> <li>- Carbon 10 ppm to 120 ppm</li> <li>- Hydrogen 20 ppm to 200 ppm</li> <li>- Phosphorus 5 ppm to 100 ppm</li> </ul>	<ul style="list-style-type: none"> <li>- In-house method : QW-LAB-216 based on ISO 7627/5 : 1983</li> <li>- In-house method : QW-LAB-307 based on ASTM E 1569-09</li> <li>- In-house method : QW-LAB-305 and QW-LAB-342 based on ASTM E 1941-10 (2016)</li> <li>- In-house method : QW-LAB-308 based on ASTM E 1447-09 (2016)</li> <li>- In-house method : QW-LAB-106 based on ISO 10714 : 1992</li> </ul>

*le*

Scope of Accreditation for Testing  
Certificate No. 20T166/1144

Accreditation No. Testing 0106

Laboratory Status  Permanent  Site  Temporary  Mobile

Field of Testing	Parameter	Test Method
Chemical field 2. Tantalum ore, tantalite columbite, tin slag tantalum glass and synthetic concentrate	- Tantalum oxide 6% to 50% by weight	- In-house method : QW-LAB-135 based on ASTM E 1031-96

Issue date 14<sup>th</sup> September B.E. 2563 (2020)

(Signature)

(Mr.Verakit Rantakittanawat)  
Deputy Secretary-General  
For Secretary-General  
Thai Industrial Standards Institute