



Shatin, NT, HONG KONG  
香港新界沙田

Telex 電傳: 50301 CUHK HX  
E-mail 電子郵件:uls@cuhk.edu.hk

Tel 電話 : (852) 2609 7958  
Fax 圖傳: (852) 2603 6862

Report No. 3478  
Radiation Board Approval No. AL 10/2007

Radiological (Ionizing Radiation) Test Report  
of "Quantum Pendant"

I. Information of Client :

Name of Client : Wellab Limited.  
Address Room 1701 Technology Park  
18 On Lai Street,  
Shatin, N.T., Hong Kong

II. Description of Sample:

Ten disks of "Quantum Pendant" weighted about 179g were received for the radiological tests for the uranium and thorium contents. Each disk is a ceramic disk of approximately 43 mm in diameter 5.5 mm thick. One side of the disk was marked "QUANTUM.SCIENCE Hope for Children" and a serial number. The following is the photo of the samples.

Photo of the samples



Report No. RAD 3478

III. Radiological Tests and Results:

The following tests were performed by Mr. YIP Sung Tat on 18 and 22 December 2009.

(a) Test of Alpha, Beta and Gamma rays emissions

The alpha, beta and gamma rays emitted by the ten sample disks were measured by a GM probe (EP-15 Mini-Instruments) and the meter showed 0.75 counts per seconds (cps) above the background counts which was 0.75 cps.

(b) Test of gamma rays emissions.

The gamma rays emitted by the ten sample disks were measured by a NaI scintillation detector (44A Mini-Instruments) and the meter showed 2.5 cps above the background counts which was 0.25 cps

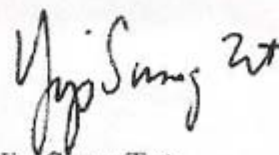
The meter was calibrated by thorium and uranium reference samples (IAEA Reference Th and U samples) and the specific activities of U-238 and Th-232 in the samples, if any, were  $0.5 \pm 0.4$  Bq/g and  $0.2 \pm 0.2$  Bq/g respectively.

IV. Summary of Findings:

- (a) The ionizing radiation emitted from the samples is detectable by a GM counter.
- (b) The specific radioactivity of the sample is less than 0.9 Bq/g for uranium and less than 0.4 Bq/g for thorium.
- (c) Since the specific radioactivity is less than 1 Bq/g, the sample is exempted without further consideration to report (that it is radioactive) under Article 3 of EU 96/29/EURATOM.
- (d) Since the specific radioactivity is less than 75 Bq/g, the sample is **not** considered as a radioactive substance defined under the Radiation Ordinance, Chapter 303, Laws of Hong Kong.

Reported by

Signature

: 

Name of the Approved Person

: Yip Sung Tat

Date

: 28 December 2009