



**Determination of TFe, Fe(II), SiO<sub>2</sub>, CaO, MgO, P, S, Al<sub>2</sub>O<sub>3</sub>,  
Mn, Ti, K<sub>2</sub>O, Na<sub>2</sub>O contents in iron ore  
(APLAC T076)**

**INSTRUCTIONS  
(FOR PARTICIPATING LABORATORIES)**

**1. ORGANIZATION**

The PT scheme on “Determination of TFe, Fe(II), SiO<sub>2</sub>, CaO, MgO, P, S, Al<sub>2</sub>O<sub>3</sub>, Mn, Ti, K<sub>2</sub>O, Na<sub>2</sub>O contents in iron ore (APLAC T076)” is organized by the China National Accreditation Service for Conformity Assessment (CNAS) and executed by the China NIL Research Centre for Proficiency Testing, as the collaborator under the auspices of Asia-Pacific Laboratory Accreditation Cooperation (APLAC). The main objective of the scheme is to evaluate the performance of participating laboratories on the concerned tests through inter-laboratory comparison.

**2. SAMPLE**

- (a) Participating laboratories will independently receive two kinds of iron ore samples (each containing 30 g), which are titled *Iron Ore10-1* and *Iron Ore10-2*, from their respective accreditation bodies (AB).
- (b) Upon receipt of the samples, participating laboratories are recommended to carefully check the samples for any physical damages and defects.
- (c) Participating laboratories are recommended to promptly acknowledge receipt of the sample by e-mail or faxing the “Receipt Form (for Participating Laboratories)” to the NIL. New sample will be re-sent by the NIL for any damaged claims if problems found.
- (d) The intact sample is recommended to be stored in a secured environment at room temperature before use.

**3. ANALYSIS**

- (a) Twelve elements are required to be determined in the sample, and the content ranges of the elements are showed in the table below:

Unit: mass %

<b>TFe</b>	<b>Fe(II)*</b>	<b>SiO<sub>2</sub></b>	<b>CaO</b>	<b>MgO</b>	<b>P</b>	<b>S</b>
60~70	0.1~1	1~10	0.01~0.2	0.05~0.2	0.05~0.1	0.005~0.05
<b>Al<sub>2</sub>O<sub>3</sub></b>	<b>Mn</b>	<b>Ti</b>	<b>K<sub>2</sub>O</b>	<b>Na<sub>2</sub>O</b>		
1~5	0.1~1	0.01~0.1	0.01~0.05	0.005~0.05		

\*Note: Fe(II) denotes acid-soluble iron(II).

- (b) Participating laboratories are supposed to use their preferable test methods (could be accredited, in-house, modified, etc.), which are normally implemented to test their customer samples. However, it is strongly suggested to implement the international or national consensus standards. It is requested that a copy of the full text of analysis method (except ISO Standard) be provided to NIL. Please record the method used on the results sheet.



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- (c) Each laboratory shall be requested to test each element for twice in repeatability conditions, and provide two tested results and their average value. The determination results are requested to be reported in mass percent.
- (d) The reported significant figure is correspondingly affected by the content range of elements tested. The significant figures recommended are as follows: XX.XX%, X.XX%, 0.XXX%, 0.0XXX%, 0.00XX%.

**4. RESULTS**

- (a) Report all the duplicate data and the arithmetic mean in the “Results Sheet”.
- (b) Please try to evaluate and report the expanded uncertainty for individual element.
- (c) Fill in the information of your testing condition and instrument information in the “Results Sheet”.
- (d) Participating laboratories should complete the “Results Sheet” and submit the paper-based document and e-document to the NIL no later than **October 8, 2010** (Notes: Unless for special reasons, results submitted after the deadline might be rejected by the organizers.)

**5. ENQUIRIES**

Please contact the representative of NIL for further enquiries concerning the scheme:

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