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2019 Proficiency Testing Program of Trace Elements in Chemical Fertilizer
Organized by System Research of Soil and Water Quality Sub-group,
Agricultural Chemistry Group,

Agricultural Production Sciences Research and Development Division,

Department of Agriculture

Report No:

01/2019

Participant:

ศูนย์เครื่องมือวิทยาศาสตร์และเทคโนโลยี มหาวิทยาลัยวลัยลักษณ์

Participant ID:

62-TE-27

Parameters	No. of reported results	Assigned values (X <sub>pt</sub> )	Standard deviations for proficiency assessment $(\sigma_{pt})$	Reported mean result	Z-score
Total iron ; Fe (%)	28	1.08	0.15	1.06	-0.13
Total manganese ; Mn (%)	28	2.46	0.25	2.62	0.64
Total zinc ; Zn (%)	26	3.90	0.13	3.97	0.54
Total copper ; Cu (%)	28	0.09	0.01	0.09	0.00
Acid soluble boron ; B (%)	25	0.28	0.04	_	
Total molybdenum ; Mo (mg/kg)	24	42.06	6.73	_	

## Note:

- 1. Assigned values  $(X_{pt})$  are determined by the system research of fertilizer quality sub-group, department of agriculture.
- 2. Standard deviations for proficiency assessment ( $\sigma_{pt}$ ) of total iron, total manganese and acid soluble boron are calculated from the results of participants in this round, according to Algorithm A (ISO 13528: 2015) while others are the predicted standard deviations calculated from the predicted relative standard deviation of reproducibility (AOAC, 2016).
- 3. Laboratory whose z-score marked with "A" means unacceptable result (|Z-score  $| \ge 3$ ) and z-score marked with "W" means warning result (|Z|-score |Z|). Laboratory shall review and investigate result.
  - 4. This summary sheet shall be read in conjunction with the final report, available at http://bit.do/eQhkv.

Reported by:

Approved by:

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Authorized by:

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(Ms. Wannarut Chutibut)

(Ms. Yarnthicha jittsa-aad) Program Coordinator (Ms. Charirat Kusonwiriyawong)
Head of System Research of Soil
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Director of Agricultural Chemistry Group

Date

May, 2019

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ครั้งที่ 2 : 1/1