

**JABATAN KIMIA MALAYSIA
PROFICIENCY TESTING PROGRAMME**

WAPAS 1-19

Year 2019

**Anions in Drinking Water:
Chloride, Sulphate, Nitrate, Fluoride.**

KIMIA PT Final Report No. 18/2019

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**Jabatan Kimia Malaysia
Jalan Sultan
46661 Petaling Jaya, Selangor
MALAYSIA
Tel: 603-79853000
Fax: 603-79853014
<http://ptos.kimia.gov.my>**

ACKNOWLEDGEMENTS

This proficiency testing programme was conducted by Quality Management and Research Centre in collaboration with Environmental Quality Division of Department of Chemistry Malaysia, Petaling Jaya.

We would like to thank the management and staff of the participating laboratories for their support towards this programme.

Approved signatory,

Li Hui Ling

Proficiency Testing Coordinator
Chemical Metrology Division
Department of Chemistry Malaysia
46661 Petaling Jaya
Selangor
MALAYSIA

Tel: 603-79853163

Fax: 603-79853014

Email: lhling@kimia.gov.my

This report was authorized by
Director of Chemical Metrology Division
Khairul Anuar bin Abdul Aziz
Date: 15th November 2019

SUMMARY

This proficiency testing programme was conducted in September – October 2019. A total of one hundred and ten (110) participants from laboratories in Malaysia participated in this PT scheme. One PT item labelled as WAPAS 1-19 “Item A” was dispatched to the participating laboratories and only 108 participants had submitted their results.

Results for this study are summarised as follows:

| PT Item | Testing Parameter | Assigned value (mg/L) | Expanded Uncertainty (mg/L) | Number of scores, $ z \leq 2.0$ | Total number of responses | % $ z \leq 2.0$ |
|---------|-------------------|-----------------------|-----------------------------|----------------------------------|---------------------------|------------------|
| Item A | Chloride | 81 | 2 | 91 | 95 | 95.8 |
| | Sulphate | 29 | 0.6 | 81 | 87 | 93.1 |
| | Nitrate | 4.6 | 0.2 | 61 | 80 | 76.2 |
| | Fluoride | 0.44 | 0.02 | 82 | 90 | 91.1 |

The expanded uncertainties are based on coverage factor, $k = 2$ for 95% confidence level.