

**JABATAN KIMIA MALAYSIA
PROFICIENCY TESTING PROGRAMME**

WAPAS 6-19

Year 2019

Calcium, Magnesium and Total Hardness in Drinking Water

KIMIA PT Final Report No. 21/2019

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ACKNOWLEDGEMENTS

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

Approved signatory,

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This report was authorized by
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SUMMARY

This proficiency testing programme was conducted in October-November 2019. A total of eighty-four (84) participants from laboratories in Malaysia and ASEAN countries participated in this PT scheme. One PT item labelled as WAPAS 6-19 "Item A" was dispatched to the participating laboratories and 80 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	Calcium	20.0	0.4	66	74	89
	Magnesium	8.8	0.2	69	73	95
	Total Hardness	86.9	1.0	74	77	96

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