



## External Quality Assessment Scheme in Hematology in Thailand: Reticulocyte Count Performance:

National External Quality Assessment Scheme (NEQAS) is being organized in Thailand by the Bureau of Laboratory Quality Standards, Department of Medical Sciences, Ministry of Public Health, Bangkok, Thailand. The scheme involves various specialties of health laboratory services such as hematology, clinical chemistry, immunology and blood banking. The performance of reticulocyte count is one parameter of NEQAS in hematology.

### Methodology

The material for NEQAS in reticulocyte count performance was prepared by staining blood smears that were scanned by the microscope for checking the quality of staining and cell distribution. Four cycles of samples were dispatched to 97 health laboratories which included 8 regional medical sciences centers (RMSC), 17 regional hospitals (RH) and 72 provincial hospitals (PH). The performance of participants for each cycle was evaluated by deviation index (DI) as recommended by International External Quality Assessment Scheme for Hematology and World Health Organization.

### Results

This results of performance were received by the organizer from cycle 1 to cycle 4 from 87.62, 86.60, 78.35 and 83.50% laboratories respectively. The turn-around time ranged from 1 day to 28 days. The accuracy of individual counting is presented in

Table 1. Excellent performance was by 37.27%, good performance by 28.92%, satisfactory performance by 25.17%, while unsatisfactory performance and serious problem & were encountered in 4.95 and 3.69% participants respectively.

**Table 1: Laboratory Performance of Reticulocyte Counting**

	Devia- -tion index	Cycle 1	Cycle 2	Cycle 3	Cycle 4	
Excellent performance	>0.5	38 (44.70)	33 (39.29)	26 (34.21)	25 (30.86)	37.27
Good performance	0.5-1.0	29 (34.12)	16 (19.05)	25 (32.89)	24 (29.63)	28.92
Satisfactory performance	1.0-2.0	12 (14.12)	28 (33.33)	17 (22.37)	25 (30.86)	25.17
Unsatisfactory performance	2.0-3.0	5 (5.88)	2 (2.38)	5 (6.58)	4 (4.94)	4.95
Problem must be investigated immediately	>3.0	1 (1.18)	5 (5.95)	3 (3.95)	3 (3.70)	3.69

The efficiency and effectiveness of this survey indicate the performance of individual laboratories and help initiate good laboratory practices. The NEQAS is an essential feature of quality assurance of health laboratories which is advantageous of supporting health care.

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