

**Hong Kong Institute of Medical Laboratory Sciences**

**Quality Assurance Programme Ltd.**

**And**

**The Hong Kong College of Pathologists**

# Interpretative Quality Assurance Programme in Haematology

**August Survey (2026)**

**Dispatch date: 4 August 2026**

**Date of Return: on or before 18 August 2026**

**HONG KONG INSTITUTE OF MEDICAL LABORATORY SCIENCES  
QUALITY ASSURANCE PROGRAMME Ltd.  
And  
THE HONG KONG COLLEGE OF PATHOLOGISTS**

**INTERPRETATIVE QUALITY ASSURANCE PROGRAMME in HAEMATOLOGY**

**INSTRUCTIONS**

1. In the package there are three peripheral blood smears and one haemoglobin pattern analysis.
2. Process and test survey samples as patient specimens using currently practised analytical procedures in your laboratory.
3. Survey results should be typed or printed legibly on the Return Form.
4. A fillable survey form for Interpretative Quality Assurance Programme in Haematology (HI) can be downloaded at HKIMLSQAP webpage ( <http://www.hkimlsqap.org/index.aspx>).
5. Return your survey results to the HKIMLSQAP either by Facsimile to 2124 2798 or email to [info@hkimlsqap.org](mailto:info@hkimlsqap.org).
6. Do not forward any particulars of your laboratory other than the assigned confidential Laboratory Code.
7. Return survey results to HKIMLSQAP on or before the due date specified on the Result Return Forms. Late or no return of survey data will be documented in your report.
8. For further enquiry, please contact HKIMLSQAP Ltd.  
Phone: (852) 24990015 Fax: (852) 2124 2798 E-mail: [info@hkimlsqap.org](mailto:info@hkimlsqap.org)

**CONFIDENTIALITY**

HKIMLSQAP is committed to keep all details of participants confidential. Please refer to <http://www.hkimlsqap.org>

Lab. Code \_\_\_\_\_ Date of return on or before 18 August 2026

## IQ 2631 (Peripheral Smear)

History: A 71-year-old man presented with neck mass. A complete blood count showed WBC  $14.2 \times 10^9/L$  (reference interval:  $3.7 - 9.2 \times 10^9/L$ ), Hb 10.9 g/dL (reference interval: 13.4 – 17.1 g/dL) and platelet  $99 \times 10^9/L$  (reference interval: 145 – 370  $\times 10^9/L$ ).

1. Please describe your peripheral blood smear findings.

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2. What is the diagnosis? (Please specify classification system used when appropriate).

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3. What further investigations will you perform?

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Answers provided by (please check one):

- |                                                             |                          |
|-------------------------------------------------------------|--------------------------|
| 1. Specialist Haematologist                                 | <input type="checkbox"/> |
| 2. Trainee Haematologist                                    | <input type="checkbox"/> |
| 3. Pathologist in another discipline other than haematology | <input type="checkbox"/> |
| 4. Medical Technologist                                     | <input type="checkbox"/> |
| 5. Other medical personnel (please specify) _____           | <input type="checkbox"/> |

**Lab. Code** \_\_\_\_\_ **Date of return on or before** **18 August 2026**

## IQ 2632 (Peripheral Smear)

**History:** A 91-year-old woman presented with fever. A complete blood count showed WBC  $24.4 \times 10^9/L$  (reference interval:  $3.7 - 9.2 \times 10^9/L$ ), Hb 12.6 g/dL (reference interval: 11.7 – 14.9 g/dL) and platelet  $54 \times 10^9/L$  (reference interval:  $145 - 370 \times 10^9/L$ ).

1. Please describe your peripheral blood smear findings.

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2. What is the diagnosis? (Please specify classification system used when appropriate).

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3. What further investigations will you perform?

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Answers provided by (please check one):

- |                                                             |                          |
|-------------------------------------------------------------|--------------------------|
| 1. Specialist Haematologist                                 | <input type="checkbox"/> |
| 2. Trainee Haematologist                                    | <input type="checkbox"/> |
| 3. Pathologist in another discipline other than haematology | <input type="checkbox"/> |
| 4. Medical Technologist                                     | <input type="checkbox"/> |
| 5. Other medical personnel (please specify) _____           |                          |

Lab. Code \_\_\_\_\_ Date of return on or before **18 August 2026**

## IQ 2633 (Peripheral Smear)

History: A 51-year-old man complained of headache. A complete blood count showed WBC  $255.0 \times 10^9/L$  (reference interval:  $3.7 - 9.2 \times 10^9/L$ ), Hb 7.0 g/dL (reference interval: 13.4 – 17.1 g/dL) and platelet  $35 \times 10^9/L$  (reference interval:  $145 - 370 \times 10^9/L$ ).

1. Please describe your peripheral smear findings.

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2. What is the diagnosis?

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3. What further investigations will you perform?

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Answers provided by (please check one):

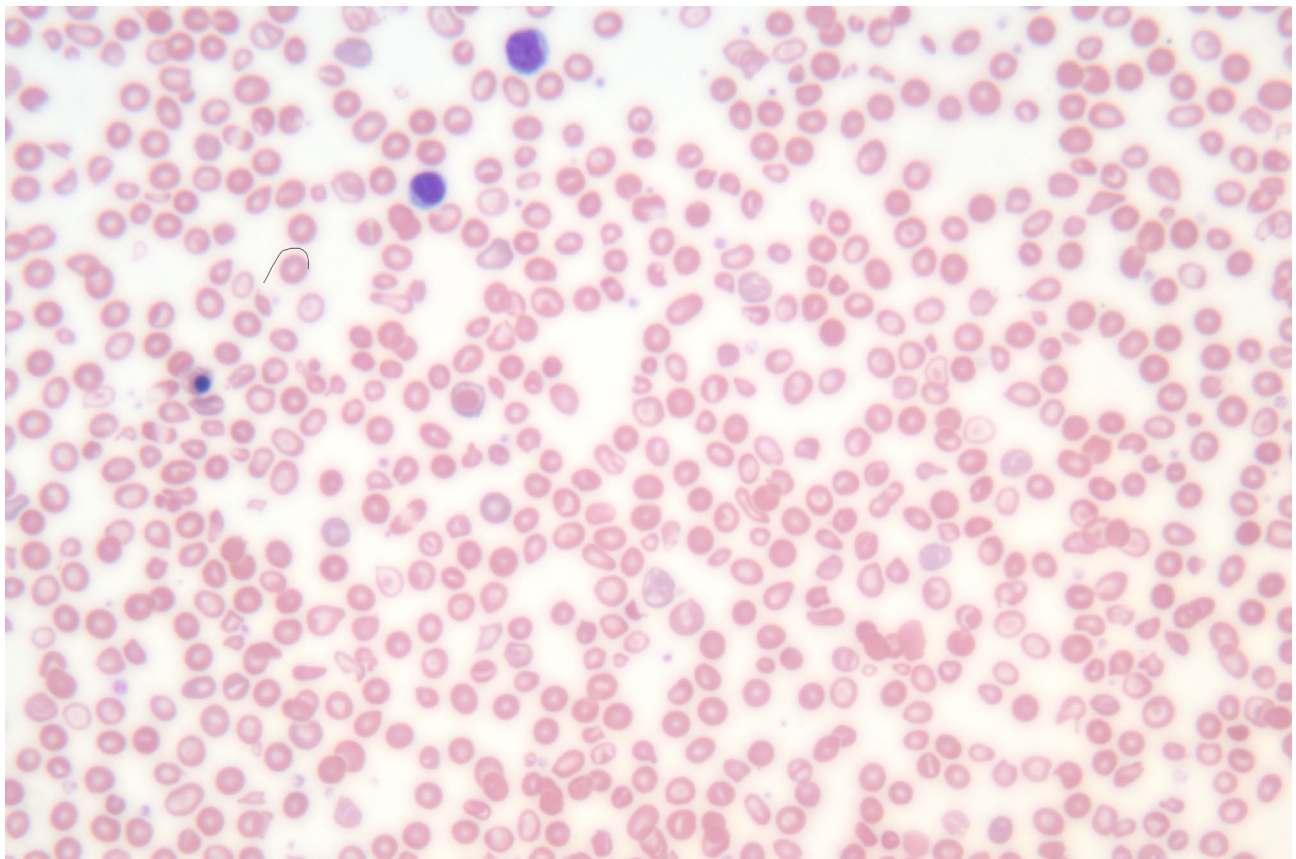
- |                                                             |                          |
|-------------------------------------------------------------|--------------------------|
| 1. Specialist Haematologist                                 | <input type="checkbox"/> |
| 2. Trainee Haematologist                                    | <input type="checkbox"/> |
| 3. Pathologist in another discipline other than haematology | <input type="checkbox"/> |
| 4. Medical Technologist                                     | <input type="checkbox"/> |
| 5. Other medical personnel (please specify) _____           | <input type="checkbox"/> |

Lab. Code \_\_\_\_\_ Date of return on or before 18 August 2026

## IQ 2634 (Haemoglobin Pattern Interpretation)

Hemoglobin pattern study was performed for a six-month old infant. The red cell indices were: Hb 8.9 g/dL, MCV 65.6 fL, MCH 22.9 pg and RDW 26.4. Peripheral blood film (post-transfusion) was given below. No HbH inclusions were seen by supravital stain. Please refer to Figures A to C for Hb pattern study.

Peripheral blood smear



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## IQ 2634 (Haemoglobin Pattern Interpretation)

Figure A. High Performance Liquid Chromatography (BIORAD Variant II)

| Peak Name | Calibrated Area % | Area % | Retention Time (min) | Peak Area |
|-----------|-------------------|--------|----------------------|-----------|
| Unknown   | ---               | 0.3    | 0.65                 | 6313      |
| P1        | ---               | 0.3    | 0.90                 | 7062      |
| F         | 67.6*             | ---    | 1.18                 | 1352997   |
| P3        | ---               | 1.0    | 1.82                 | 21108     |
| Ao        | ---               | 1.3    | 2.21                 | 26909     |
| A2        | 32.9*             | ---    | 3.68                 | 700673    |

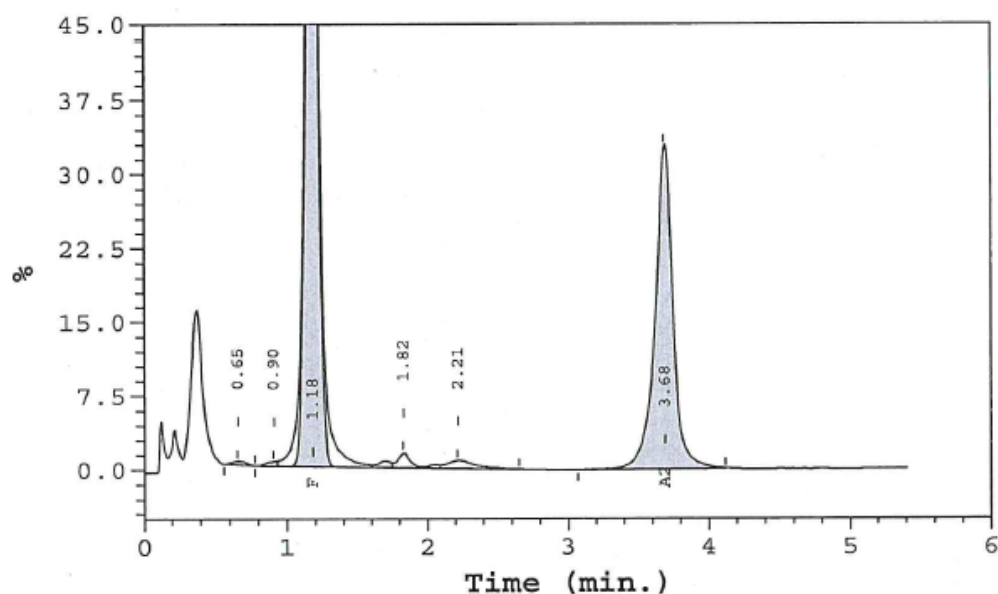
Total Area: 2,115,062

F Concentration = 67.6\* %

A2 Concentration = 32.9\* %

\*Values outside of expected ranges

Analysis comments:



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## IQ 2634 (Haemoglobin Pattern Interpretation)

### A. Interpretation of High Performance Liquid Chromatography

A1. HbA present / absent\* (\* circle the correct answer)

A2. HbA<sub>2</sub> \_\_\_\_\_ % of total Hb

normal / depressed / elevated / undetermined\*

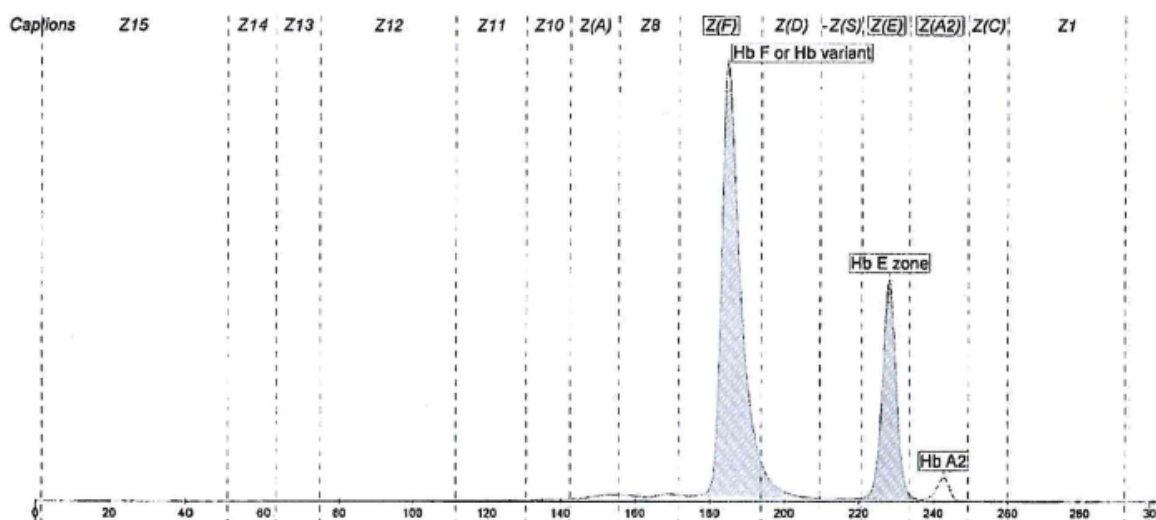
A3. HbF \_\_\_\_\_ % of total Hb

normal / depressed / elevated / undetermined\*

A4. Hb variant(s) 1. \_\_\_\_\_ % of total Hb

2. \_\_\_\_\_ % of total Hb

B. Capillary Electrophoresis Variant (non-HbA, A<sub>2</sub> or F) present/ absent / not done\*



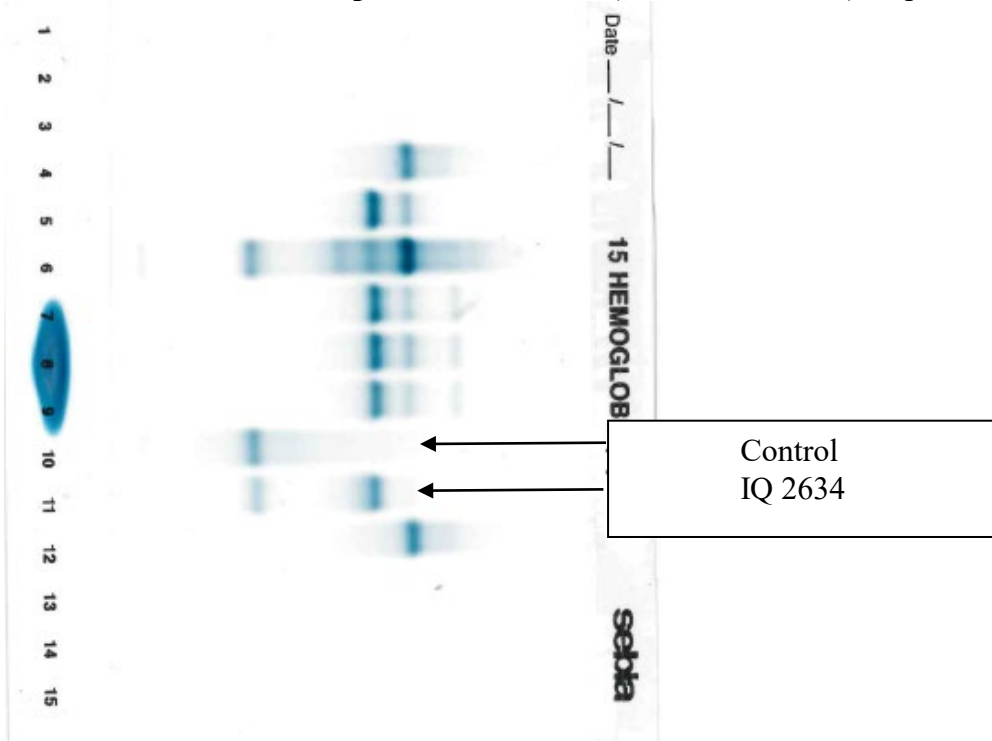
### Haemoglobin Electrophoresis

| Name               | %    | Normal Values % |
|--------------------|------|-----------------|
| Hb F or Hb variant | 71.9 |                 |
| Hb E zone          | 25.8 |                 |
| Hb A <sub>2</sub>  | 2.3  |                 |

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## IQ 2634 (Haemoglobin Pattern Interpretation)

C. Alkaline Gel Electrophoresis Variant (non-HbA, A<sub>2</sub> or F) present/ absent / not done\*



C S F A

Please indicate relative position of variant(s) below

Cathode \_\_\_\_\_ Anode

C S F A

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## IQ 2634 (Haemoglobin Pattern Interpretation)

### C. Diagnostic evaluation of patient (circle more than one if appropriate)

**Thalassaemia** (pure quantitative defect)

absent / present\*

alpha / beta / gamma / delta chain\*

heterozygous / homozygous / compound heterozygous / double heterozygous\*

**Variant** (structural defect, excluding Hb Barts, HbH)

absent / present\*

alpha / beta / gamma / delta chain\*

heterozygous / homozygous / compound heterozygous / double heterozygous\*

identity: \_\_\_\_\_

What are the possibilities?

\_\_\_\_\_

What further test(s) would you suggest?

\_\_\_\_\_

Answers provided by (please check one):

- |                                                             |                          |
|-------------------------------------------------------------|--------------------------|
| 1. Specialist Haematologist                                 | <input type="checkbox"/> |
| 2. Trainee Haematologist                                    | <input type="checkbox"/> |
| 3. Pathologist in another discipline other than haematology | <input type="checkbox"/> |
| 4. Medical Technologist                                     | <input type="checkbox"/> |
| 5. Other medical personnel (please specify) _____           | <input type="checkbox"/> |

(End of question)