

#### **UK NEQAS Haematology**

# SURVEY 2305AH:Abnormal Haemoglobins including Liquid Newborn DISTRIBUTION DATE: 2nd October 2023

CLOSING DATE: 23:59 (GMT); 12th October 2023

#### 1.0 Distribution Package

Distribution 23J includes the following surveys:

1. Full Blood Count

2. Abnormal Haemoglobins, Hb A2, Hb F & Hb S

3. Infectious Mononucleosis

4. Automated Differential Leucocyte Count

A full package comprises a plastic postal bag, containing documentation and a moulded plastic specimen carrier comprising a transparent side holding vials of survey material and/or a slide carrier and an absorbent side that will absorb up to 50ml of liquid, i.e. the entire contents of the package, in the event of a breakage.

Specimens are only included for the tests for which you are registered. If you do not receive the expected combination of specimens, notify us immediately so that appropriate action can be taken.

Repeat specimens may be requested by Email: haem@ukneqas.org.uk or Tel: +44 (0)1923 587111

#### 2.0 Information required for Control of Substances Hazardous to Health (COSHH)

This information is printed on a separate information sheet and should be reviewed by your COSHH assessor for consideration of any changes necessary to your local work practices.

#### 3.0 Use of packaged material

This material is for use in External Quality Assessment Surveys to assess laboratory performance.

#### **4.0 Survey Contents**

Participants are supplied with specimens appropriate for their registered details. This survey contains human whole blood specimens:

- Specimens 2305SS1, 2305SS2 and 2305SS3 are for Sickle Cell Screening Test only.
- Specimens **2305AH1**, **2305AH2** and **2305AH3** are for Haemoglobin Fraction Identification and Quantitation of Hb A<sub>2</sub>, Hb F and Hb S (if present).
- Specimens 2305LN1 and 2305LN2 are for Haemoglobin Fraction Identification.

#### Please note:

- Specimens 2305SS1, 2305SS2 and 2305SS3 may not be from the same pools as specimens 2305AH1, 2305AH2 and 2305AH3
- Specimens 2305LN1 and 2305LN2 are only supplied for participants registered for that test.

#### Specimen handling and disposal

- On receipt, specimens should be stored at 2 8°C until tested
- Allow the material to equilibrate to room temperature for 10 minutes on a roller or similar mixer before testing.
- The material should be handled and discarded as patient material.
- Specimens should be tested according to your standard laboratory protocols for sickle cell screening (SS samples only) and/or haemoglobinopathy screening (AH samples only)

#### **Reporting the Results**

#### **Fraction Identification:**

**Abnormal Haemoglobins specimens (AH) -** For each sample tick the appropriate fraction(s) found, including Hb A, Hb A₂ and Hb F. If your method does not separate Hb C and Hb E, use the ♦ box. Do not tick both Hb C and Hb E.



### Haematology and Transfusion

Liquid newborn specimens (LN) - As above, except it is not necessary to report HbA2 where found.

#### **Fraction Quantitation:**

#### **Adult Specimens (AH)**

- Hb A2 quantitation is not required if Hb S or other abnormal Hb is present.
- Assess your Hb A<sub>2</sub> and Hb F results in terms of your normal reference ranges for an adult male.
- Results reported as "less than" or "greater than" are not included for statistical analysis.

#### **Liquid Newborn Specimens (LN)**

• No fraction quantitation results are required.

#### Interpretation of results:

Clinical details are given to assist you with your suggested interpretation of your results. The details can be found online <a href="https://www.ukneqash.org/sampleentry">www.ukneqash.org/sampleentry</a> by selecting the specimen number tab and clicking the link 'Click to view sample details'. Please see table 1 below for reference ranges.

**Table 1. Adult reference ranges** 

Parameter	Female	Male
RBC (10 <sup>12</sup> /L)	3.80 - 4.80	4.50 - 5.80
Hb (g/L)	115 – 155	130 – 165
MCV (fL)	79.0 – 96.0	79.0 – 96.0
MCH (pg)	27.0 – 32.0	27.0 – 32.0

Please note the blood count details given relate to the simulated case and may not be identical to the specimens you have received for testing.

The coded comments are shown in tables 1 and 2 of the document entitled Coded Comments for Abnormal Haemoglobin Surveys and Liquid Newborn Specimens (enclosed). There will be no performance assessment of these comments.

#### 5.0 Return of results

- Return your results on line at <a href="www.uknegash.org/sampleentry">www.uknegash.org/sampleentry</a> or by email to <a href="mailto:haem@uknegas.org.uk">haem@uknegas.org.uk</a> providing your PRN.
- If you find the specimen quality unsatisfactory, tick the 'unsatisfactory' box and note the details in the Comment box.

#### **6.0 Next Distribution**

The next Abnormal Haemoglobins, HbA<sub>2</sub> & HbF Survey (2306AH) is scheduled for 4th of December 2023



### Haematology and Transfusion

## UK NEQAS Haematology CODED COMMENTS FOR ABNORMAL HAEMOGLOBINS SURVEY

#### Table 1: COMMENTS FOR ABNORMAL HAEMOGLOBINS (AH) SPECIMENS ONLY

400         No evidence of a haemoglobin variant or thalassaemia           402         No evidence of sickle haemoglobin           403         No evidence of thalassaemia           404         No evidence of beta thalassaemia           410         No evidence of beta thalassaemia           411         Results consistent with sickle cell carrier (Hb AS)           412         Results consistent with Hb C carrier (Hb AD)           413         Results consistent with Hb E carrier (Hb AD)           414         Results consistent with Hb variant carrier (state the variant in the comment box, if known)           416         Results consistent with Hb A2 variant           417         Results consistent with Hb Lepore carrier (Hb AC)           418         Results consistent with Hb variant carrier of no known clinical significance (state the variant in the comment box, if known)           419         Results consistent with Hb SC disease (Hb SC)           420         Results consistent with Hb SC disease (Hb SD)           421         Results consistent with Hb SC disease (Hb SD)           422         Results consistent with Hb SC disease (Hb SD)           423         Results consistent with Hb SC disease (Hb SD)           424         Results consistent with Hb SC disease (Hb SC)           425         Results consistent with Hb act thalassaemia carrier	Code	Comments	
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455 Iron status should be checked	453		
	454	Recommend referral to a Consultant Haematologist	
450 Other comment (please specify in comment box)	455	Iron status should be checked	
	450	Other comment (please specify in comment box)	

#### **Please Note**

The comment codes have been revised: some have been withdrawn, some added and some re-worded.

Please check the codes that you report carefully.

Your comments on the codes used are invited and should be noted in the comment box on your results submission.

There is no need to add either of the following, or any other similar 'footnote' type comments that are added to all reports, to your comments for these EQA exercises:

- 1. This data and the interpretation of the data may be misleading if the patient has had a recent transfusion. If so, the tests should be repeated at least four months after the last transfusion.
- 2. Any genetic predictions following these results assume that the family relationships are as stated and sample identification is correct.

Restricted circulation: Not for publication without permission



## Haematology and Transfusion

#### Table 2: COMMENTS FOR LIQUID NEWBORN (LN) SPECIMENS ONLY

Code	Comment
700	No common haemoglobin variant detected: beta-thalassaemia trait cannot be excluded
710	Results consistent with sickle cell carrier
711	Results consistent with Hb C carrier
712	Results consistent with Hb D carrier
713	Results consistent with Hb E carrier
714	Results consistent with Hb O <sup>Arab</sup> carrier
715	Results consistent with haemoglobin variant present (but not Hb S, C, D, E or O Arab)
716	Results suggestive of Hb H disease
720	Results consistent with sickle cell disease (HbSS, HbS/beta thalassaemia or HbS/HPFH)
721	Results consistent with Hb SC Disease
722	Results consistent with Hb SD Disease
723	Results consistent with Hb SE Disease
724	Results consistent with Hb SO <sup>Arab</sup> Disease
725	Results consistent with Hb S and another variant (but not Hb C, D, E or O Arab)
730	Results consistent with homozygous Hb C or Hb C/ beta thalassaemia
731	Results consistent with homozygous Hb D or Hb D/ beta thalassaemia
732	Results consistent with homozygous Hb E or Hb E/ beta thalassaemia
733	Results consistent with homozygous Hb O <sup>Arab</sup> or Hb O <sup>Arab</sup> / beta thalassaemia
734	Results consistent with homozygous Hb Variant (but not S, C, D, E or O Arab) or Hb variant/beta thal
735	Results consistent with beta thalassaemia major or prematurity (Hb F only or HbA<1.5%)
740	Results consistent with recent transfusion or specimen contamination
745	Follow up referral required
750	Other comment (please specify in comment box)