

**UK NEQAS for H&I Scheme 2B - Crossmatching by Flow Cytometry**

2B05/2019 OSWB

T-cells	Serum 1	Serum 2	Serum 3	Serum 4
Total distributed	28	28	28	28
Total submitted	27	27	27	27
Not Tested	1	1	1	1
Negative	26	26	26	25
Positive	-	-	-	1
% Negative	100	100	100	96.2
% Positive	-	-	-	3.8
<b>Consensus</b>	<b>Negative</b>	<b>Negative</b>	<b>Negative</b>	<b>Negative</b>
Unacceptable	-	-	-	Positive
Number acceptable	26	26	26	25
Number unacceptable	1	1	1	2
Assessed	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Lab	Cytometer Reading				Serum 1	Serum 2	Serum 3	Serum 4	Viability	Units for cytometer readings	T-cell local neg control	T-cell local pos control	T-cell pos result value
	Serum 1	Serum 2	Serum 3	Serum 4									
101	Negative	Negative	Negative	Negative	0.149	0.152	0.151	0.166		MFI	0.148	0.675	2SD
114	Negative	Negative	Negative	Negative	180	181	185	187		linear channel	178	314	228
119	Negative	Negative	Negative	Negative	147	115	117	133	90	MnIX	111	846	Ratio:Pos>1,289 B,line(-1,4)
126	Negative	Negative	Negative	Negative	318	352	319	360	90	Median Channel shift	336	921	>81 channels
136	Negative	Negative	Negative	Negative	11.2	6	5	5.1	97	geo mean	5.87	1602	NR>200
142	Negative	Negative	Negative	Positive	132	130	162	188	87.3		104	4160	163 (104+ 3SD)
162	Negative	Negative	Negative	Negative					100	300000			
163	Negative	Negative	Negative	Negative	1.46	0.98	0.96	0.99	95	Geomean linear channel (serum/negative control)	1	10.9	2.3
176	Negative	Negative	Negative	Negative	0.05	0.02	0.02	0		MFI Shift	0	0.33	0.4
185	Negative	Negative	Negative	Negative	0.55	0.56	0.54	0.57		Median Log Channel	0.52	0.88	2SD
186	Negative	Negative	Negative	Negative	296	280	282	268	90	MFI - log channel	271	4758	1.5 fold the T-cell local negative control
193	Negative	Negative	Negative	Negative	7.38	4.23	4.26	4.63			4.52	147.7	geo mean sera / geo min negative control >2.4
194	Negative	Negative	Negative	Negative	0.641	0.619	0.66	0.63	95	mediane	0.584	8.03	ratio>1.7
201	Negative	Negative	Negative	Negative	1.08	0.99	1.00	1.17	97	mean	0.601	18.7	ratio higher than 2
204	Negative	Negative	Negative	Negative	70	48	48	57		Mean log channel	56.7	5920	85.05 = 1.5 x 56.7
206	Negative	Negative	Negative	Negative	0.41	0.4	0.39	0.39	90	MFI	0.32	1.23	MFI ratio>1.6
209	Negative	Negative	Negative	Negative	407 (1.5)	287 (1.1)	295 (1.1)	296 (1.1)	97	Geometric MFI (Ratio)	271	1823 (6.7)	3SD
220	Negative	Negative	Negative	Negative	1525	1387.5	1673	1233	99	linear acquisition, linear values	1742.25	135546	6000 above the mean of the negative controls
230	Negative	Negative	Negative	Negative	5.00	5.40	5.33	4.83	90		4.37	39.24	40
238	Negative	Negative	Negative	Negative	1353	1534	1707	1359			1366	2625	MESF SERUM / MESF NEG CONTROL >1.6
245	Negative	Negative	Negative	Negative	1	1	0.5	0	100	linear channel shift	0 mean linear channel	97.5 linear channel shift	7 linear channel shift
262	Negative	Negative	Negative	Negative	1239	1402	1664	1313	55	median channel shift	1620	17572	1.8 SD and > 12% positive cells
284	Negative	Negative	Negative	Negative	90	95	96	83	100	median log channel	107	139	ratio above negative value >1,2
297	Negative	Negative	Negative	Negative	11	152	173	174		Fluorescence Median	04-Jul	23-Feb	1.8x Tneg
315	Not Tested	Not Tested	Not Tested	Not Tested									
358	Negative	Negative	Negative	Negative									
374	Negative	Negative	Negative	Negative									
401													

**UK NEQAS for H&I Scheme 2B - Crossmatching by Flow Cytometry**

Lab Comments	Received	Tested	Assessment
101	04/09/2019	05/09/2019	100%
114	04/09/2019	04/09/2019	100%
119	04/09/2019	04/09/2019	100%
126	04/09/2019	05/09/2019	100%
136	05/09/2019	05/09/2019	100%
142	04/09/2019	06/09/2019	75%
162	04/09/2019	04/09/2019	100%
163	04/09/2019	09/09/2019	100%
176	04/09/2019	06/09/2019	100%
185 B-cells results S1 and S4 are b-line.	04/09/2019	05/09/2019	100%
186	04/09/2019	04/09/2019	100%
193	04/09/2019	04/09/2019	100%
194	04/09/2019	04/09/2019	100%
201	04/09/2019	05/09/2019	100%
204	05/09/2019	05/09/2019	100%
206	04/09/2019	05/09/2019	100%
209	03/09/2019	06/09/2019	100%
220	04/09/2019	05/09/2019	100%
230	06/09/2019	06/09/2019	100%
238	04/09/2019	05/09/2019	100%
245	04/09/2019	05/09/2019	100%
262	04/09/2019	04/09/2019	100%
284	04/09/2019	04/09/2019	100%
297	04/09/2019	05/09/2019	100%
315 Shortage of reagents	0000-00-00	0000-00-00	Not assessed
358	04/09/2019	04/09/2019	100%
374	10/09/2019	11/09/2019	100%
401			Unacceptable

**UK NEQAS for H&I Scheme 2B - Crossmatching by Flow Cytometry**

2B05/2019 OSWB

B-cells	Serum 1	Serum 2	Serum 3	Serum 4
Total distributed	27	27	27	27
Total submitted	26	26	26	26
Not Tested	1	1	1	1
Negative	5	2	15	2
Positive	20	23	8	23
Equivocal	-	-	2	-
% Negative	20	8	60	8
% Positive	80	92	32	92
% Equivocal	-	-	8	-
<b>Consensus</b>	<b>Positive</b>	<b>Positive</b>	<b>-</b>	<b>Positive</b>
Unacceptable	Negative	Negative	-	Negative
Number acceptable	20	23	-	23
Number unacceptable	6	3	-	3
Assessed <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Lab	Serum 1	Serum 2	Serum 3	Serum 4	Cytometer Reading				Viability	Units for cytometer readings	B-cell local neg control	B-cell local pos control	B-cell pos result value
					Serum 1	Serum 2	Serum 3	Serum 4					
101	Negative	Positive	Negative	Negative	0.284	0.407	0.286	0.245		MFI	0.219	2.61	2SD
114	Negative	Positive	Negative	Positive	332	440	342	450		linear channel	291	501	351
119	Positive	Positive	Positive	Positive	661	5476	1817	7157	90	MnIX	479	18198	Ratio:Pos>1,7 B.Line(1,5-1,7)
126	Positive	Negative	Negative	Positive	621	612	501	637	90	Median Channel shift	493	848	>120 channel
136									97	geo mean			
142	Positive	Positive	Negative	Positive	1049	846	720	1415	87.3		585	12958	789 (585+3SD)
162	Positive	Positive	Negative	Positive					100	300000			
163	Positive	Positive	Positive	Positive	7.4	7	2.3	8.6	95	Geomean linear channel (serum/negative control)	1	4	1.7
176	Positive	Positive	Positive	Positive	0.49	0.59	0.23	0.49		MFI Shift	0	0.61	0.22
185	Positive	Positive	Negative	Positive	0.32	0.43	0.19	0.35		Median Log Channel	0.16	1.24	2SD
186	Positive	Positive	Equivocal	Positive	1665	1974	921	1695	90	MFI - log channel	427	6842	2 fold above the local B-cell negative control
193	Positive	Positive	Equivocal	Positive	203.46	181.39	78.46	208.77			33.67	330.75	geo mean sera/geo mean negative control >2.3
194	Positive	Positive	Negative	Positive	11.2	10.5	5.12	13.1	95	mediane	2.42	84	ratio>3
201	Positive	Positive	Negative	Positive	3.94	3.75	1.72	4.83	97	mean	1.63	35.3	ratio higher than 2.5
204	Positive	Positive	Positive	Positive	1697	1196	688	1514		Mean log channel	366.8	15551	550.2 = 366.8 x 1.5
206	Positive	Positive	Positive	Positive	5.02	9.04	2.59	5.86	90	MFI	0.77	2.64	MFI ratio >1.8
209	Positive	Positive	Negative	Positive	10621 (6.4)	7343 (4.4)	2964 (1.8)	8009 (4.8)	97	Geometric MFI (Ratio)	1655	4023 (2.4)	3SD
220	Positive	Positive	Positive	Positive	27088,5	63709	16670	51262	99	linear acquisition, linear values	2713	261759	6000 above the mean of the negative controls
230	Positive	Positive	Positive	Positive	10,18	19,90	5,09	11,76	90		1,50	176,24	40
238	Negative	Positive	Negative	Negative	3165	5439	3779	4317			2487	24160	MESF SERUM / MESF NEG CONTROL >2.2
245	Negative	Positive	Negative	Positive	7.5	24.5	6	17.5	100	linear channel shift	1.5 mean linear channel	175 linear channel shift	15 linear channel shift
262	Negative	Negative	Negative	Positive	5311	5071	3511	6553	55	median channel shift	3608	38931	1.8SD and > 12% positive cells
284	Positive	Positive	Negative	Positive	273	391	156	253	100	median log channel	11-May	30-Jun	ratio above negative value >1,2
297	Positive	Positive	Positive	Positive	1317	1529	610	1823		Fluorescence Median	17-Nov	19-Dec	2 x Tneg
315	Not Tested	Not Tested	Not Tested	Not Tested									
358	Positive	Positive	Negative	Positive									
374	Positive	Positive	Negative	Positive									
401													

**UK NEQAS for H&I Scheme 2B - Crossmatching by Flow Cytometry**

Lab Comments	Received	Tested	Assessment
101	04/09/2019	05/09/2019	33%
114	04/09/2019	04/09/2019	67%
119	04/09/2019	04/09/2019	100%
126	04/09/2019	05/09/2019	67%
136	05/09/2019	05/09/2019	Not assessed
142	04/09/2019	06/09/2019	100%
162	04/09/2019	04/09/2019	100%
163	04/09/2019	09/09/2019	100%
176	04/09/2019	06/09/2019	100%
185 B-cells results S1 and S4 are b-line.	04/09/2019	05/09/2019	100%
186	04/09/2019	04/09/2019	100%
193	04/09/2019	04/09/2019	100%
194	04/09/2019	04/09/2019	100%
201	04/09/2019	05/09/2019	100%
204	05/09/2019	05/09/2019	100%
206	04/09/2019	05/09/2019	100%
209	03/09/2019	06/09/2019	100%
220	04/09/2019	05/09/2019	100%
230	06/09/2019	06/09/2019	100%
238	04/09/2019	05/09/2019	33%
245	04/09/2019	05/09/2019	67%
262	04/09/2019	04/09/2019	33%
284	04/09/2019	04/09/2019	100%
297	04/09/2019	05/09/2019	100%
315 Shortage of reagents	0000-00-00	0000-00-00	Not assessed
358	04/09/2019	04/09/2019	100%
374	10/09/2019	11/09/2019	100%
401			Unacceptable

**UK NEQAS for H&I Scheme 2B - Crossmatching by Flow Cytometry**

2B06/2019 OSWB

T-cells	Serum 1	Serum 2	Serum 3	Serum 4
Total distributed	28	28	28	28
Total submitted	27	27	27	27
Not Tested	3	1	3	1
Negative	10	24	5	20
Positive	12	1	19	5
Equivocal	2	1	-	1
% Negative	41.7	92.3	20.8	76.9
% Positive	50	3.8	79.2	19.2
% Equivocal	8.3	3.8	-	3.8
<b>Consensus</b>	<b>-</b>	<b>Negative</b>	<b>Positive</b>	<b>Negative</b>
Unacceptable	-	Equivocal	Negative	Equivocal
		Positive		Positive
Number acceptable	-	24	19	20
Number unacceptable	-	3	6	7
Assessed <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Lab	Serum 1	Serum 2	Serum 3	Serum 4	Cytometer Reading				Viability	Units for cytometer readings	T-cell local neg control	T-cell local pos control	T-cell pos result value
					Serum 1	Serum 2	Serum 3	Serum 4					
101	Negative	Negative	Negative	Negative	0.169	0.158	0.167	0.172		MFI	0.165	0.616	2SD
114	Positive	Equivocal	Negative	Negative	328	295	237	226		linear channel	223	285	273
119	Negative	Negative	Positive	Negative	190	154	477	164	87	MnIX	120	1429	Ratio:Pos>1,289 B.Line(-1,4)
126	Negative	Negative	Positive	Negative	485	407	492	431	90	Median Channel shift	405	938	>81 channels
136	Not Tested	Negative	Not Tested	Negative		2.3		2.6	94	geo mean	3	99	NR>200
142	Positive	Negative	Positive	Equivocal	356	224	321	251	85.5		209	2965	224 (209+3SD)
162	Negative	Negative	Positive	Negative					99	300000			
163	Positive	Negative	Positive	Positive	6.5	2.2	13.6	6.1	97	Geomean linear channel (serum/neg control)	1	16.1	2.3
176	Negative	Negative	Negative	Negative	0.15	0.11	0.22	0.15		MFI shift	0	0.28	0.4
185	Negative	Negative	Positive	Negative	0.52	0.52	0.53	0.52		Median Log Channel	0.46	0.81	2SD
186	Equivocal	Negative	Negative	Negative	407	309	356	289	90	MFI-log channel	263	6582	1.5 fold the local negative control
193	Positive	Negative	Positive	Positive	25.41	8.64	36.7	15.11			4.48	280.95	geo mean sera/geo mean negative control >2.4
194	Positive	Negative	Positive	Negative	1.6	0.96	2	1.13	90	mediane	0.73	21.6	ratio>1.7
201	Equivocal	Negative	Positive	Negative	1.96	1.14	2.44	1.29	97	mean	0.626	22	ratio higher than 2
204	Positive	Negative	Positive	Negative	166	85	363	115		Mean log channel	75.7	2250	113.5 = 1.5 x 75.7
206	Not Tested	Negative	Negative	Negative		0.67	0.67	0.66	90	MFI	0.42	1.27	MFI ratio >1.6
209	Positive	Negative	Positive	Positive	1450 (4.5)	520 (1.6)	1774 (5.5)	923 (2.9)	95	MFI (Ratio)	320	3023 (9.4)	3SD
220	Positive	Negative	Positive	Positive	18538	4277	18424.5	11099.5	98	linear acquisition, linear values	1847,75	261642	6000 above the mean of the negative controls
230	Negative	Negative	Positive	Positive	4.57	4.53	7.23	7.57	90		4.14	37,18	40
238	Negative	Negative	Positive	Negative	1995	1848	2148	1815			1757	2973	MESF SERUM/ MESF NEGATIVE CONTROL >1.6
245	Positive	Negative	Positive	Negative	6.8	1.3	6.3	3.8	100	linear channel shift	0.7 mean linear channel	199.3 linear channel shift	7 linear channel shift (from 5 to linear channel shift : weak positive)
262	Negative	Negative	Not Tested	Negative	1941	1751		1868	70	median channel shift	991	24883	2SD and > 12% positive cells
284	Positive	Negative	Positive	Negative	188	148	203	154	100	median log channel	21-May	07-Sep	ratio above negative value >1,2
297	Positive	Negative	Positive	Negative	424	249	557	307		Fluorescence Median	29-Jul	12-Sep	1.8xTneg
315	Not Tested	Not Tested	Not Tested	Not Tested									
358	Negative	Negative	Positive	Negative									
374	Positive	Positive	Positive	Negative									
401													

**UK NEQAS for H&I Scheme 2B - Crossmatching by Flow Cytometry**

Lab Comments	Received	Tested	Assessment
101	04/09/2019	05/09/2019	67%
114	04/09/2019	05/09/2019	33%
119	04/09/2019	04/09/2019	100%
126	04/09/2019	05/09/2019	100%
136 S1 and S3 tubes broken during centrifugation	05/09/2019	05/09/2019	100%
142	04/09/2019	06/09/2019	67%
162	04/09/2019	04/09/2019	100%
163	04/09/2019	05/09/2019	67%
176	04/09/2019	06/09/2019	67%
185	04/09/2019	05/09/2019	100%
186	04/09/2019	04/09/2019	67%
193	04/09/2019	04/09/2019	67%
194	04/09/2019	04/09/2019	100%
201	04/09/2019	05/09/2019	100%
204	05/09/2019	05/09/2019	100%
206 S1 replicate issues	04/09/2019	05/09/2019	67%
209	03/09/2019	06/09/2019	67%
220	04/09/2019	05/09/2019	67%
230	06/09/2019	06/09/2019	67%
238	04/09/2019	05/09/2019	100%
245	04/09/2019	05/09/2019	100%
262 S2 less than 300 B cells S3 technical problem with T cells	04/09/2019	04/09/2019	100%
284	04/09/2019	04/09/2019	100%
297	04/09/2019	05/09/2019	100%
315 Shortage of reagents	0000-00-00	0000-00-00	Not assessed
358	04/09/2019	04/09/2019	100%
374	10/09/2019	11/09/2019	67%
401			Unacceptable

**UK NEQAS for H&I Scheme 2B - Crossmatching by Flow Cytometry**

2B06/2019 OSWB

B-cells	Serum 1	Serum 2	Serum 3	Serum 4
Total distributed	27	27	27	27
Total submitted	26	26	26	26
Not Tested	2	2	1	1
Negative	10	2	-	18
Positive	13	22	25	6
Equivocal	1	-	-	1
% Negative	41.7	8.3	-	72
% Positive	54.2	91.7	100	24
% Equivocal	4.2	-	-	4
<b>Consensus</b>	-	<b>Positive</b>	<b>Positive</b>	-
Unacceptable	-	Negative	-	-
Number acceptable	-	22	25	-
Number unacceptable	-	3	1	-
Assessed <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Lab	Cytometer Reading				Serum 1	Serum 2	Serum 3	Serum 4	Viability	Units for cytometer readings	B-cell local neg control	B-cell local pos control	B-cell pos result value
	Serum 1	Serum 2	Serum 3	Serum 4									
101	Negative	Positive	Positive	Negative	0.197	0.368	0.341	0.248		MFI	0.24	2.14	2SD
114	Negative	Positive	Positive	Negative	276	371	403	278		linear channel	250	407	310
119	Negative	Positive	Positive	Negative	684	2736	8921	878	87	MnIX	350	13858	Ratio:Pos>1.7 B.Line(1,5-1,7)
126	Negative	Negative	Positive	Negative	567	597	733	497	90	Median Channel shift	486	845	>120 channels
136									94	geo mean			
142	Positive	Positive	Positive	Negative	794	654	1757	473	85.5		338	7985	637 (338+3SD)
162	Negative	Positive	Positive	Negative					99	300000			
163	Positive	Positive	Positive	Positive	4.9	7.5	27.2	3.1	97	Geomean linear channel (serum/nega1		4.9	1.7
176	Negative	Positive	Positive	Negative	0.17	0.64	0.84	0.11		MFI shift	0	0.64	0.22
185	Negative	Positive	Positive	Negative	0.16	0.4	0.55	0.16		Median Log Channel	0.14	0.97	2SD
186	Positive	Positive	Positive	Negative	826	1240	2449	460	90	MFI-log channel	314	8431	2 fold above the local negative control
193	Positive	Positive	Positive	Equivocal	93.07	133.46	472.83	54.73			27.95	343.42	geo mean sera/geo mean neg control > 2.3
194	Positive	Positive	Positive	Negative	4.1	7.77	28	2.82	90	mediane	1.12	87.9	ratio>3
201	Equivocal	Positive	Positive	Negative	2.97	4.66	14.2	1.66	97	mean	1,19	43,1	ratio higher than 2,5
204	Positive	Positive	Positive	Positive	643	1012	3737	480		Mean log channel	324.9	9870	487.3 = 1.5 x 324.9
206	Not Tested	Positive	Positive	Positive		6.75	9.19	1.72	90	MFI	0.68	2.02	MFI ratio >1.8
209	Positive	Positive	Positive	Negative	3832 (3.4)	5539 (4.9)	20297 (17.8)	2382 (2.1)	95	MFI (Ratio)	1138	3955 (3.5)	3SD
220	Positive	Positive	Positive	Positive	22260	52379	87214,5	14929,5	98	linear acquisition, linear values	2042,5	261795	6000 above the mean of the negative controls
230	Negative	Positive	Positive	Positive	1,46	10,09	44,11	5,38	90		2,46	168,49	40
238	Negative	Positive	Positive	Negative	3034	4547	7203	2648			2217	8753	MESF SERUM / MESF NEG CONTROL > 2.2
245	Positive	Positive	Positive	Negative	17.5	20.5	70	8.5	100	linear channel shift	2 mean linear channel	318.5 linear channel shift	15 linear channel shift
262	Negative	Not Tested	Positive	Negative	3365		11353	2353	70	median channel shift	2266	43276	1.8SD and > 12% positive cells
284	Positive	Positive	Positive	Negative	168	324	534	127	100	median log channel	05-May	04-Aug	ratio above negative value >1.2
297	Positive	Positive	Positive	Negative	615	1013	4170	348		Fluorescence Median	17-Aug	11-Jun	2xTneg
315	Not Tested	Not Tested	Not Tested	Not Tested									
358	Positive	Positive	Positive	Negative									
374	Positive	Negative	Positive	Positive									
401													

**UK NEQAS for H&I Scheme 2B - Crossmatching by Flow Cytometry**

Lab Comments	Received	Tested	Assessment
101	04/09/2019	05/09/2019	100%
114	04/09/2019	05/09/2019	100%
119	04/09/2019	04/09/2019	100%
126	04/09/2019	05/09/2019	50%
136 S1 and S3 tubes broken during centrifugation	05/09/2019	05/09/2019	Not assessed
142	04/09/2019	06/09/2019	100%
162	04/09/2019	04/09/2019	100%
163	04/09/2019	05/09/2019	100%
176	04/09/2019	06/09/2019	100%
185	04/09/2019	05/09/2019	100%
186	04/09/2019	04/09/2019	100%
193	04/09/2019	04/09/2019	100%
194	04/09/2019	04/09/2019	100%
201	04/09/2019	05/09/2019	100%
204	05/09/2019	05/09/2019	100%
206 S1 replicate issues	04/09/2019	05/09/2019	100%
209	03/09/2019	06/09/2019	100%
220	04/09/2019	05/09/2019	100%
230	06/09/2019	06/09/2019	100%
238	04/09/2019	05/09/2019	100%
245	04/09/2019	05/09/2019	100%
262 S2 less than 300 B cells S3 technical problem with T cells	04/09/2019	04/09/2019	100%
284	04/09/2019	04/09/2019	100%
297	04/09/2019	05/09/2019	100%
315 Shortage of reagents	0000-00-00	0000-00-00	Not assessed
358	04/09/2019	04/09/2019	100%
374	10/09/2019	11/09/2019	50%
401			Unacceptable