

EQA round: IH4/23 - Blood Group Serology

Deadline: 17.11.2023

Setup: groups - R (manufacturer of kit)

AV = assigned value
 RV = reference value
 >>> ... expected result
 > ... acceptable result
 ± ... result not assessed

N_{tot} = total number of the results
 N_{rel} = relative number of the results

N_{eva} = number of the results assessed
 N_{suc} = number of successful results
 S_{rel} = relative success

Test Sample Group	Frequency of the results				Success		
	AV	N _{tot}	N _{rel} [%]	Result	N _{eva}	N _{suc}	S _{rel} [%]
Set 1 and 2							
(700) ABO blood group		167			167	167	100
Samples E1 and S1		167			167	167	100
(6) APR	RV >>>	2	1,2	Blood group: A			
(14) Bio-Rad	RV >>>	51	31	Blood group: A			
(40) Ortho Clinical Diagnostics	RV >>>	1	0,6	Blood group: A			
(52) Dynex	RV >>>	1	0,6	Blood group: A			
(64) Exbio Olomouc	RV >>>	9	5,4	Blood group: A			
(80) DiaMed	RV >>>	13	7,8	Blood group: A			
(159) Grifols	RV >>>	48	29	Blood group: A			
(172) Immucor	RV >>>	23	14	Blood group: A			
(173) Sanguin	RV >>>	8	4,8	Blood group: A			
(174) IVT Imuno	RV >>>	6	3,6	Blood group: A			
(203) ANTITOXIN	RV >>>	2	1,2	Blood group: A			
(999) another manufacturer	RV >>>	3	1,8	Blood group: A			
Samples E2 and S2		167			167	167	100
(6) APR	RV >>>	2	1,2	Blood group: 0			
(14) Bio-Rad	RV >>>	51	31	Blood group: 0			
(40) Ortho Clinical Diagnostics	RV >>>	1	0,6	Blood group: 0			
(52) Dynex	RV >>>	1	0,6	Blood group: 0			
(64) Exbio Olomouc	RV >>>	9	5,4	Blood group: 0			
(80) DiaMed	RV >>>	13	7,8	Blood group: 0			
(159) Grifols	RV >>>	48	29	Blood group: 0			
(172) Immucor	RV >>>	23	14	Blood group: 0			
(173) Sanguin	RV >>>	8	4,8	Blood group: 0			
(174) IVT Imuno	RV >>>	6	3,6	Blood group: 0			
(203) ANTITOXIN	RV >>>	2	1,2	Blood group: 0			
(999) another manufacturer	RV >>>	3	1,8	Blood group: 0			
(703) A subgroup		53			53	53	100
Samples E1 and S1		53			53	53	100
(0) not specified	RV >>>	53	100	A subgroup A1			
Samples E2 and S2		53			53	53	100
(0) not specified	RV >>>	53	100	Not specified			
(705) Rh D antigen (blood-donor)		95			95	95	100
Samples E1 and S1		95			95	95	100
(6) APR	RV >>>	4	4,2	Positive (RhD+)			
(14) Bio-Rad	RV >>>	28	29	Positive (RhD+)			
(52) Dynex	RV >>>	1	1,1	Positive (RhD+)			
(64) Exbio Olomouc	RV >>>	4	4,2	Positive (RhD+)			
(80) DiaMed	RV >>>	3	3,2	Positive (RhD+)			
(159) Grifols	RV >>>	24	25	Positive (RhD+)			
(172) Immucor	RV >>>	22	23	Positive (RhD+)			
(173) Sanguin	RV >>>	3	3,2	Positive (RhD+)			
(174) IVT Imuno	RV >>>	3	3,2	Positive (RhD+)			
(203) ANTITOXIN	RV >>>	2	2,1	Positive (RhD+)			
(999) another manufacturer	RV >>>	1	1,1	Positive (RhD+)			
Samples E2 and S2		95			95	95	100
(6) APR	RV >>>	4	4,2	Positive (RhD+)			
(14) Bio-Rad	RV >>>	28	29	Positive (RhD+)			
(52) Dynex	RV >>>	1	1,1	Positive (RhD+)			
(64) Exbio Olomouc	RV >>>	4	4,2	Positive (RhD+)			
(80) DiaMed	RV >>>	3	3,2	Positive (RhD+)			
(159) Grifols	RV >>>	24	25	Positive (RhD+)			
(172) Immucor	RV >>>	22	23	Positive (RhD+)			
(173) Sanguin	RV >>>	3	3,2	Positive (RhD+)			
(174) IVT Imuno	RV >>>	3	3,2	Positive (RhD+)			
(203) ANTITOXIN	RV >>>	2	2,1	Positive (RhD+)			
(999) another manufacturer	RV >>>	1	1,1	Positive (RhD+)			
(709) Rh D antigen (recipient/ pregnant/ newborn)		159			159	159	100
Samples E1 and S1		159			159	159	100
(6) APR	RV >>>	2	1,3	Positive (RhD+)			
(14) Bio-Rad	RV >>>	50	31	Positive (RhD+)			
(40) Ortho Clinical Diagnostics	RV >>>	1	0,6	Positive (RhD+)			

EQA round: IH4/23 - Blood Group Serology

Deadline: 17.11.2023

Setup: groups - R (manufacturer of kit)

Test Sample Group	Frequency of the results				Success		
	AV	N _{tot}	N _{rel} [%]	Result	N _{eva}	N _{suc}	S _{rel} [%]
(50) Merck	RV	>>>	1	0,6	Positive (RhD+)		
(52) Dynex	RV	>>>	1	0,6	Positive (RhD+)		
(64) Exbio Olomouc	RV	>>>	9	5,7	Positive (RhD+)		
(80) DiaMed	RV	>>>	10	6,3	Positive (RhD+)		
(159) Grifols	RV	>>>	46	29	Positive (RhD+)		
(172) Immucor	RV	>>>	24	15	Positive (RhD+)		
(173) Sanguin	RV	>>>	4	2,5	Positive (RhD+)		
(174) IVT Imuno	RV	>>>	6	3,8	Positive (RhD+)		
(203) ANTITOXIN	RV	>>>	2	1,3	Positive (RhD+)		
(999) another manufacturer	RV	>>>	3	1,9	Positive (RhD+)		
Samples E2 and S2			159			159	159 100
(6) APR	RV	>>>	2	1,3	Positive (RhD+)		
(14) Bio-Rad	RV	>>>	50	31	Positive (RhD+)		
(40) Ortho Clinical Diagnostics	RV	>>>	1	0,6	Positive (RhD+)		
(50) Merck	RV	>>>	1	0,6	Positive (RhD+)		
(52) Dynex	RV	>>>	1	0,6	Positive (RhD+)		
(64) Exbio Olomouc	RV	>>>	9	5,7	Positive (RhD+)		
(80) DiaMed	RV	>>>	10	6,3	Positive (RhD+)		
(159) Grifols	RV	>>>	46	29	Positive (RhD+)		
(172) Immucor	RV	>>>	24	15	Positive (RhD+)		
(173) Sanguin	RV	>>>	4	2,5	Positive (RhD+)		
(174) IVT Imuno	RV	>>>	6	3,8	Positive (RhD+)		
(203) ANTITOXIN	RV	>>>	2	1,3	Positive (RhD+)		
(999) another manufacturer	RV	>>>	3	1,9	Positive (RhD+)		
(715) Antigen C			88			88	88 100
Samples E1 and S1			88			88	88 100
(6) APR	RV	>>>	1	1,1	Positive		
(14) Bio-Rad	RV	>>>	35	40	Positive		
(50) Merck	RV	>>>	1	1,1	Positive		
(64) Exbio Olomouc	RV	>>>	1	1,1	Positive		
(80) DiaMed	RV	>>>	7	8	Positive		
(159) Grifols	RV	>>>	21	24	Positive		
(172) Immucor	RV	>>>	14	16	Positive		
(173) Sanguin	RV	>>>	2	2,3	Positive		
(174) IVT Imuno	RV	>>>	3	3,4	Positive		
(203) ANTITOXIN	RV	>>>	3	3,4	Positive		
Samples E2 and S2			88			88	88 100
(6) APR	RV	>>>	1	1,1	Positive		
(14) Bio-Rad	RV	>>>	35	40	Positive		
(50) Merck	RV	>>>	1	1,1	Positive		
(64) Exbio Olomouc	RV	>>>	1	1,1	Positive		
(80) DiaMed	RV	>>>	7	8	Positive		
(159) Grifols	RV	>>>	21	24	Positive		
(172) Immucor	RV	>>>	14	16	Positive		
(173) Sanguin	RV	>>>	2	2,3	Positive		
(174) IVT Imuno	RV	>>>	3	3,4	Positive		
(203) ANTITOXIN	RV	>>>	3	3,4	Positive		
(716) Antigen c			88			88	87 99
Samples E1 and S1			88			88	87 99
(6) APR	RV	>>>	1	1,1	Negative		
(14) Bio-Rad	RV	>>>	34	39	Negative		
			1	1,1	Positive		
(50) Merck	RV	>>>	1	1,1	Negative		
(64) Exbio Olomouc	RV	>>>	1	1,1	Negative		
(80) DiaMed	RV	>>>	7	8	Negative		
(159) Grifols	RV	>>>	21	24	Negative		
(172) Immucor	RV	>>>	14	16	Negative		
(173) Sanguin	RV	>>>	2	2,3	Negative		
(174) IVT Imuno	RV	>>>	3	3,4	Negative		
(203) ANTITOXIN	RV	>>>	3	3,4	Negative		
Samples E2 and S2			88			88	88 100
(6) APR	RV	>>>	1	1,1	Negative		
(14) Bio-Rad	RV	>>>	35	40	Negative		
(50) Merck	RV	>>>	1	1,1	Negative		
(64) Exbio Olomouc	RV	>>>	1	1,1	Negative		
(80) DiaMed	RV	>>>	7	8	Negative		
(159) Grifols	RV	>>>	21	24	Negative		
(172) Immucor	RV	>>>	14	16	Negative		
(173) Sanguin	RV	>>>	2	2,3	Negative		

EQA round: IH4/23 - Blood Group Serology

Deadline: 17.11.2023

Setup: groups - R (manufacturer of kit)

Test Sample Group	Frequency of the results					Success		
	AV	N _{tot}	N _{rel} [%]	Result	N _{eva}	N _{suc}	S _{rel} [%]	
(174) IVT Imuno	RV	>>>	3	3,4	Negative			
(203) ANTITOXIN	RV	>>>	3	3,4	Negative			
(718) Antigen E			89			89	89	100
Samples E1 and S1			89			89	89	100
(6) APR	RV	>>>	1	1,1	Negative			
(14) Bio-Rad	RV	>>>	35	39	Negative			
(50) Merck	RV	>>>	1	1,1	Negative			
(64) Exbio Olomouc	RV	>>>	1	1,1	Negative			
(80) DiaMed	RV	>>>	7	7,9	Negative			
(159) Grifols	RV	>>>	22	25	Negative			
(172) Immucor	RV	>>>	14	16	Negative			
(173) Sanguin	RV	>>>	2	2,2	Negative			
(174) IVT Imuno	RV	>>>	3	3,4	Negative			
(203) ANTITOXIN	RV	>>>	3	3,4	Negative			
Samples E2 and S2			89			89	89	100
(6) APR	RV	>>>	1	1,1	Negative			
(14) Bio-Rad	RV	>>>	35	39	Negative			
(50) Merck	RV	>>>	1	1,1	Negative			
(64) Exbio Olomouc	RV	>>>	1	1,1	Negative			
(80) DiaMed	RV	>>>	7	7,9	Negative			
(159) Grifols	RV	>>>	22	25	Negative			
(172) Immucor	RV	>>>	14	16	Negative			
(173) Sanguin	RV	>>>	2	2,2	Negative			
(174) IVT Imuno	RV	>>>	3	3,4	Negative			
(203) ANTITOXIN	RV	>>>	3	3,4	Negative			
(719) Antigen e			88			88	88	100
Samples E1 and S1			88			88	88	100
(6) APR	RV	>>>	1	1,1	Positive			
(14) Bio-Rad	RV	>>>	34	39	Positive			
(17) Biogema	RV	>>>	1	1,1	Positive			
(50) Merck	RV	>>>	1	1,1	Positive			
(64) Exbio Olomouc	RV	>>>	1	1,1	Positive			
(80) DiaMed	RV	>>>	7	8	Positive			
(159) Grifols	RV	>>>	21	24	Positive			
(172) Immucor	RV	>>>	14	16	Positive			
(173) Sanguin	RV	>>>	2	2,3	Positive			
(174) IVT Imuno	RV	>>>	3	3,4	Positive			
(203) ANTITOXIN	RV	>>>	3	3,4	Positive			
Samples E2 and S2			88			88	88	100
(6) APR	RV	>>>	1	1,1	Positive			
(14) Bio-Rad	RV	>>>	34	39	Positive			
(17) Biogema	RV	>>>	1	1,1	Positive			
(50) Merck	RV	>>>	1	1,1	Positive			
(64) Exbio Olomouc	RV	>>>	1	1,1	Positive			
(80) DiaMed	RV	>>>	7	8	Positive			
(159) Grifols	RV	>>>	21	24	Positive			
(172) Immucor	RV	>>>	14	16	Positive			
(173) Sanguin	RV	>>>	2	2,3	Positive			
(174) IVT Imuno	RV	>>>	3	3,4	Positive			
(203) ANTITOXIN	RV	>>>	3	3,4	Positive			
(717) Antigen C^w			74			74	73	99
Samples E1 and S1			74			74	74	100
(6) APR	RV	>>>	1	1,4	Negative			
(14) Bio-Rad	RV	>>>	25	34	Negative			
(50) Merck	RV	>>>	1	1,4	Negative			
(64) Exbio Olomouc	RV	>>>	2	2,7	Negative			
(80) DiaMed	RV	>>>	2	2,7	Negative			
(159) Grifols	RV	>>>	21	28	Negative			
(172) Immucor	RV	>>>	14	19	Negative			
(173) Sanguin	RV	>>>	3	4,1	Negative			
(174) IVT Imuno	RV	>>>	3	4,1	Negative			
(203) ANTITOXIN	RV	>>>	2	2,7	Negative			
Samples E2 and S2			74			74	73	99
(6) APR	RV	>>>	1	1,4	Negative			
(14) Bio-Rad	RV	>>>	25	34	Negative			
(50) Merck	RV	>>>	1	1,4	Negative			
(64) Exbio Olomouc	RV	>>>	2	2,7	Negative			
(80) DiaMed	RV	>>>	2	2,7	Negative			
(159) Grifols	RV	>>>	1	1,4	Not specified			

EQA round: IH4/23 - Blood Group Serology

Deadline: 17.11.2023

Setup: groups - R (manufacturer of kit)

Test Sample Group	Frequency of the results					Success		
	AV	N _{tot}	N _{rel} [%]	Result	N _{eva}	N _{suc}	S _{rel} [%]	
	RV >>>	20	27	Negative				
(172) Immucor	RV >>>	14	19	Negative				
(173) Sanguin	RV >>>	3	4,1	Negative				
(174) IVT Imuno	RV >>>	3	4,1	Negative				
(203) ANTITOXIN	RV >>>	2	2,7	Negative				
(720) Antigen K		95			95	94	99	
Samples E1 and S1		95			95	94	99	
(6) APR	RV >>>	1	1,1	Negative				
(14) Bio-Rad	RV >>>	32	34	Negative				
		1	1,1	Positive				
(50) Merck	RV >>>	1	1,1	Negative				
(80) DiaMed	RV >>>	7	7,4	Negative				
(159) Grifols	RV >>>	29	31	Negative				
(172) Immucor	RV >>>	14	15	Negative				
(173) Sanguin	RV >>>	3	3,2	Negative				
(174) IVT Imuno	RV >>>	5	5,3	Negative				
(203) ANTITOXIN	RV >>>	2	2,1	Negative				
Samples E2 and S2		95			95	95	100	
(6) APR	RV >>>	1	1,1	Negative				
(14) Bio-Rad	RV >>>	33	35	Negative				
(50) Merck	RV >>>	1	1,1	Negative				
(80) DiaMed	RV >>>	7	7,4	Negative				
(159) Grifols	RV >>>	29	31	Negative				
(172) Immucor	RV >>>	14	15	Negative				
(173) Sanguin	RV >>>	3	3,2	Negative				
(174) IVT Imuno	RV >>>	5	5,3	Negative				
(203) ANTITOXIN	RV >>>	2	2,1	Negative				
(721) Antigen k		46			46	46	100	
Samples E1 and S1		46			46	46	100	
(14) Bio-Rad	RV >>>	15	33	Positive				
(64) Exbio Olomouc	RV >>>	4	8,7	Positive				
(80) DiaMed	RV >>>	2	4,3	Positive				
(159) Grifols	RV >>>	5	11	Positive				
(172) Immucor	RV >>>	4	8,7	Positive				
(173) Sanguin	RV >>>	9	20	Positive				
(174) IVT Imuno	RV >>>	2	4,3	Positive				
(203) ANTITOXIN	RV >>>	4	8,7	Positive				
(999) another manufacturer	RV >>>	1	2,2	Positive				
Samples E2 and S2		46			46	46	100	
(14) Bio-Rad	RV >>>	15	33	Positive				
(64) Exbio Olomouc	RV >>>	4	8,7	Positive				
(80) DiaMed	RV >>>	2	4,3	Positive				
(159) Grifols	RV >>>	5	11	Positive				
(172) Immucor	RV >>>	4	8,7	Positive				
(173) Sanguin	RV >>>	9	20	Positive				
(174) IVT Imuno	RV >>>	2	4,3	Positive				
(203) ANTITOXIN	RV >>>	4	8,7	Positive				
(999) another manufacturer	RV >>>	1	2,2	Positive				
(738) Antigen Kp^a		16			16	16	100	
Samples E1 and S1		16			16	16	100	
(14) Bio-Rad	RV >>>	6	38	Negative				
(64) Exbio Olomouc	RV >>>	1	6,3	Negative				
(80) DiaMed	RV >>>	1	6,3	Negative				
(159) Grifols	RV >>>	5	31	Negative				
(172) Immucor	RV >>>	2	13	Negative				
(173) Sanguin	RV >>>	1	6,3	Negative				
Samples E2 and S2		16			16	16	100	
(14) Bio-Rad	RV >>>	6	38	Negative				
(64) Exbio Olomouc	RV >>>	1	6,3	Negative				
(80) DiaMed	RV >>>	1	6,3	Negative				
(159) Grifols	RV >>>	5	31	Negative				
(172) Immucor	RV >>>	2	13	Negative				
(173) Sanguin	RV >>>	1	6,3	Negative				
(739) Antigen Kp^b		9			9	9	100	
Samples E1 and S1		9			9	9	100	
(14) Bio-Rad	RV >>>	4	44	Positive				
(64) Exbio Olomouc	RV >>>	1	11	Positive				
(80) DiaMed	RV >>>	1	11	Positive				
(159) Grifols	RV >>>	2	22	Positive				

EQA round: IH4/23 - Blood Group Serology

Deadline: 17.11.2023

Setup: groups - R (manufacturer of kit)

Test Sample Group	Frequency of the results					Success		
	AV	N _{tot}	N _{rel} [%]	Result	N _{eva}	N _{suc}	S _{rel} [%]	
(172) Immucor	RV	>>>	1	11	Positive			
Samples E2 and S2			9			9	9	100
(14) Bio-Rad	RV	>>>	4	44	Positive			
(64) Exbio Olomouc	RV	>>>	1	11	Positive			
(80) DiaMed	RV	>>>	1	11	Positive			
(159) Grifols	RV	>>>	2	22	Positive			
(172) Immucor	RV	>>>	1	11	Positive			
(729) Antigen Jk^a			42			42	42	100
Samples E1 and S1			42			42	42	100
(6) APR	RV	>>>	1	2,4	Negative			
(14) Bio-Rad	RV	>>>	14	33	Negative			
(50) Merck	RV	>>>	1	2,4	Negative			
(52) Dynex	RV	>>>	2	4,8	Negative			
(64) Exbio Olomouc	RV	>>>	1	2,4	Negative			
(80) DiaMed	RV	>>>	1	2,4	Negative			
(159) Grifols	RV	>>>	5	12	Negative			
(172) Immucor	RV	>>>	10	24	Negative			
(173) Sanguin	RV	>>>	5	12	Negative			
(203) ANTITOXIN	RV	>>>	2	4,8	Negative			
Samples E2 and S2			42			42	42	100
(6) APR	RV	>>>	1	2,4	Positive			
(14) Bio-Rad	RV	>>>	14	33	Positive			
(50) Merck	RV	>>>	1	2,4	Positive			
(52) Dynex	RV	>>>	2	4,8	Positive			
(64) Exbio Olomouc	RV	>>>	1	2,4	Positive			
(80) DiaMed	RV	>>>	1	2,4	Positive			
(159) Grifols	RV	>>>	5	12	Positive			
(172) Immucor	RV	>>>	10	24	Positive			
(173) Sanguin	RV	>>>	5	12	Positive			
(203) ANTITOXIN	RV	>>>	2	4,8	Positive			
(730) Antigen Jk^b			42			42	41	98
Samples E1 and S1			42			42	41	98
(6) APR	RV	>>>	1	2,4	Positive			
(14) Bio-Rad	RV	>>>	13	31	Positive			
(50) Merck	RV	>>>	1	2,4	Positive			
(52) Dynex	RV	>>>	2	4,8	Positive			
(64) Exbio Olomouc	RV	>>>	1	2,4	Positive			
(80) DiaMed			1	2,4	Negative			
(159) Grifols	RV	>>>	5	12	Positive			
(172) Immucor	RV	>>>	10	24	Positive			
(173) Sanguin	RV	>>>	6	14	Positive			
(203) ANTITOXIN	RV	>>>	2	4,8	Positive			
Samples E2 and S2			42			42	41	98
(6) APR	RV	>>>	1	2,4	Positive			
(14) Bio-Rad	RV	>>>	13	31	Positive			
(50) Merck	RV	>>>	1	2,4	Positive			
(52) Dynex	RV	>>>	2	4,8	Positive			
(64) Exbio Olomouc	RV	>>>	1	2,4	Positive			
(80) DiaMed			1	2,4	Negative			
(159) Grifols	RV	>>>	5	12	Positive			
(172) Immucor	RV	>>>	10	24	Positive			
(173) Sanguin	RV	>>>	6	14	Positive			
(203) ANTITOXIN	RV	>>>	2	4,8	Positive			
(727) Antigen Fy^a			43			43	43	100
Samples E1 and S1			43			43	43	100
(14) Bio-Rad	RV	>>>	16	37	Positive			
(64) Exbio Olomouc	RV	>>>	3	7	Positive			
(80) DiaMed	RV	>>>	1	2,3	Positive			
(159) Grifols	RV	>>>	5	12	Positive			
(172) Immucor	RV	>>>	10	23	Positive			
(173) Sanguin	RV	>>>	5	12	Positive			
(174) IVT Imuno	RV	>>>	1	2,3	Positive			
(203) ANTITOXIN	RV	>>>	2	4,7	Positive			
Samples E2 and S2			43			43	43	100
(14) Bio-Rad	RV	>>>	16	37	Negative			
(64) Exbio Olomouc	RV	>>>	3	7	Negative			
(80) DiaMed	RV	>>>	1	2,3	Negative			
(159) Grifols	RV	>>>	5	12	Negative			
(172) Immucor	RV	>>>	10	23	Negative			

EQA round: IH4/23 - Blood Group Serology

Deadline: 17.11.2023

Setup: groups - R (manufacturer of kit)

Test Sample Group	Frequency of the results				Success		
	AV	N _{tot}	N _{rel} [%]	Result	N _{eva}	N _{suc}	S _{rel} [%]
(173) Sanguin	RV >>>	5	12	Negative			
(174) IVT Imuno	RV >>>	1	2,3	Negative			
(203) ANTITOXIN	RV >>>	2	4,7	Negative			
(728) Antigen Fy^b		43			43	43	100
Samples E1 and S1		43			43	43	100
(14) Bio-Rad	RV >>>	16	37	Negative			
(64) Exbio Olomouc	RV >>>	3	7	Negative			
(80) DiaMed	RV >>>	1	2,3	Negative			
(159) Grifols	RV >>>	5	12	Negative			
(172) Immucor	RV >>>	9	21	Negative			
(173) Sanguin	RV >>>	5	12	Negative			
(174) IVT Imuno	RV >>>	1	2,3	Negative			
(203) ANTITOXIN	RV >>>	3	7	Negative			
Samples E2 and S2		43			43	43	100
(14) Bio-Rad	RV >>>	16	37	Positive			
(64) Exbio Olomouc	RV >>>	3	7	Positive			
(80) DiaMed	RV >>>	1	2,3	Positive			
(159) Grifols	RV >>>	5	12	Positive			
(172) Immucor	RV >>>	9	21	Positive			
(173) Sanguin	RV >>>	5	12	Positive			
(174) IVT Imuno	RV >>>	1	2,3	Positive			
(203) ANTITOXIN	RV >>>	3	7	Positive			
(722) Antigen M		42			42	42	100
Samples E1 and S1		42			42	42	100
(6) APR	RV >>>	1	2,4	Positive			
(14) Bio-Rad	RV >>>	12	29	Positive			
(52) Dynex	RV >>>	1	2,4	Positive			
(64) Exbio Olomouc	RV >>>	2	4,8	Positive			
(80) DiaMed	RV >>>	1	2,4	Positive			
(159) Grifols	RV >>>	4	9,5	Positive			
(172) Immucor	RV >>>	15	36	Positive			
(173) Sanguin	RV >>>	2	4,8	Positive			
(183) Immunodiagnostic Systems	RV >>>	1	2,4	Positive			
(203) ANTITOXIN	RV >>>	3	7,1	Positive			
Samples E2 and S2		42			42	42	100
(6) APR	RV >>>	1	2,4	Positive			
(14) Bio-Rad	RV >>>	12	29	Positive			
(52) Dynex	RV >>>	1	2,4	Positive			
(64) Exbio Olomouc	RV >>>	2	4,8	Positive			
(80) DiaMed	RV >>>	1	2,4	Positive			
(159) Grifols	RV >>>	4	9,5	Positive			
(172) Immucor	RV >>>	15	36	Positive			
(173) Sanguin	RV >>>	2	4,8	Positive			
(183) Immunodiagnostic Systems	RV >>>	1	2,4	Positive			
(203) ANTITOXIN	RV >>>	3	7,1	Positive			
(723) Antigen N		37			37	37	100
Samples E1 and S1		37			37	37	100
(6) APR	RV >>>	1	2,7	Negative			
(14) Bio-Rad	RV >>>	12	32	Negative			
(52) Dynex	RV >>>	1	2,7	Negative			
(64) Exbio Olomouc	RV >>>	1	2,7	Negative			
(80) DiaMed	RV >>>	1	2,7	Negative			
(159) Grifols	RV >>>	4	11	Negative			
(172) Immucor	RV >>>	11	30	Negative			
(173) Sanguin	RV >>>	2	5,4	Negative			
(183) Immunodiagnostic Systems	RV >>>	1	2,7	Negative			
(203) ANTITOXIN	RV >>>	3	8,1	Negative			
Samples E2 and S2		37			37	37	100
(6) APR	RV >>>	1	2,7	Positive			
(14) Bio-Rad	RV >>>	12	32	Positive			
(52) Dynex	RV >>>	1	2,7	Positive			
(64) Exbio Olomouc	RV >>>	1	2,7	Positive			
(80) DiaMed	RV >>>	1	2,7	Positive			
(159) Grifols	RV >>>	4	11	Positive			
(172) Immucor	RV >>>	11	30	Positive			
(173) Sanguin	RV >>>	2	5,4	Positive			
(183) Immunodiagnostic Systems	RV >>>	1	2,7	Positive			
(203) ANTITOXIN	RV >>>	3	8,1	Positive			

EQA round: IH4/23 - Blood Group Serology

Deadline: 17.11.2023

Setup: groups - R (manufacturer of kit)

Test Sample Group	Frequency of the results					Success		
	AV	N _{tot}	N _{rel} [%]	Result	N _{eva}	N _{suc}	S _{rel} [%]	
(724) Antigen S		43				43	43	100
Samples E1 and S1		43				43	43	100
(6) APR	RV >>>	1	2,3	Negative				
(14) Bio-Rad	RV >>>	13	30	Negative				
(50) Merck	RV >>>	1	2,3	Negative				
(52) Dynex	RV >>>	2	4,7	Negative				
(64) Exbio Olomouc	RV >>>	3	7	Negative				
(80) DiaMed	RV >>>	1	2,3	Negative				
(159) Grifols	RV >>>	5	12	Negative				
(172) Immucor	RV >>>	10	23	Negative				
(173) Sanguin	RV >>>	3	7	Negative				
(174) IVT Imuno	RV >>>	2	4,7	Negative				
(203) ANTITOXIN	RV >>>	2	4,7	Negative				
Samples E2 and S2		43				43	43	100
(6) APR	RV >>>	1	2,3	Negative				
(14) Bio-Rad	RV >>>	13	30	Negative				
(50) Merck	RV >>>	1	2,3	Negative				
(52) Dynex	RV >>>	2	4,7	Negative				
(64) Exbio Olomouc	RV >>>	3	7	Negative				
(80) DiaMed	RV >>>	1	2,3	Negative				
(159) Grifols	RV >>>	5	12	Negative				
(172) Immucor	RV >>>	10	23	Negative				
(173) Sanguin	RV >>>	3	7	Negative				
(174) IVT Imuno	RV >>>	2	4,7	Negative				
(203) ANTITOXIN	RV >>>	2	4,7	Negative				
(725) Antigen s		41				41	41	100
Samples E1 and S1		41				41	41	100
(6) APR	RV >>>	1	2,4	Positive				
(14) Bio-Rad	RV >>>	13	32	Positive				
(52) Dynex	RV >>>	1	2,4	Positive				
(64) Exbio Olomouc	RV >>>	3	7,3	Positive				
(80) DiaMed	RV >>>	1	2,4	Positive				
(159) Grifols	RV >>>	5	12	Positive				
(172) Immucor	RV >>>	7	17	Positive				
(173) Sanguin	RV >>>	5	12	Positive				
(174) IVT Imuno	RV >>>	2	4,9	Positive				
(203) ANTITOXIN	RV >>>	3	7,3	Positive				
Samples E2 and S2		41				41	41	100
(6) APR	RV >>>	1	2,4	Positive				
(14) Bio-Rad	RV >>>	13	32	Positive				
(52) Dynex	RV >>>	1	2,4	Positive				
(64) Exbio Olomouc	RV >>>	3	7,3	Positive				
(80) DiaMed	RV >>>	1	2,4	Positive				
(159) Grifols	RV >>>	5	12	Positive				
(172) Immucor	RV >>>	7	17	Positive				
(173) Sanguin	RV >>>	5	12	Positive				
(174) IVT Imuno	RV >>>	2	4,9	Positive				
(203) ANTITOXIN	RV >>>	3	7,3	Positive				
(733) Antigen Le^a		35				35	35	100
Samples E1 and S1		35				35	35	100
(14) Bio-Rad	RV >>>	12	34	Negative				
(50) Merck	RV >>>	1	2,9	Negative				
(52) Dynex	RV >>>	2	5,7	Negative				
(159) Grifols	RV >>>	4	11	Negative				
(172) Immucor	RV >>>	10	29	Negative				
(173) Sanguin	RV >>>	2	5,7	Negative				
(174) IVT Imuno	RV >>>	2	5,7	Negative				
(203) ANTITOXIN	RV >>>	2	5,7	Negative				
Samples E2 and S2		35				35	35	100
(14) Bio-Rad	RV >>>	12	34	Positive				
(50) Merck	RV >>>	1	2,9	Positive				
(52) Dynex	RV >>>	2	5,7	Positive				
(159) Grifols	RV >>>	4	11	Positive				
(172) Immucor	RV >>>	10	29	Positive				
(173) Sanguin	RV >>>	2	5,7	Positive				
(174) IVT Imuno	RV >>>	2	5,7	Positive				
(203) ANTITOXIN	RV >>>	2	5,7	Positive				

EQA round: IH4/23 - Blood Group Serology

Deadline: 17.11.2023

Setup: groups - R (manufacturer of kit)

Test Sample Group	Frequency of the results					Success		
	AV	N _{tot}	N _{rel} [%]	Result	N _{eva}	N _{suc}	S _{rel} [%]	
(734) Antigen Le^b		35			35	31	89	
Samples E1 and S1		35			35	31	89	
(14) Bio-Rad	RV >>>	12	34	Positive				
(50) Merck	RV >>>	1	2,9	Positive				
(52) Dynex	RV >>>	2	5,7	Positive				
(159) Grifols	RV >>>	4	11	Positive				
(172) Immucor	RV >>>	2	5,7	Negative				
	RV >>>	8	23	Positive				
(173) Sanguin	RV >>>	2	5,7	Positive				
(174) IVT Imuno		2	5,7	Negative				
(203) ANTITOXIN	RV >>>	2	5,7	Positive				
Samples E2 and S2		35			35	35	100	
(14) Bio-Rad	RV >>>	12	34	Negative				
(50) Merck	RV >>>	1	2,9	Negative				
(52) Dynex	RV >>>	2	5,7	Negative				
(159) Grifols	RV >>>	4	11	Negative				
(172) Immucor	RV >>>	10	29	Negative				
(173) Sanguin	RV >>>	2	5,7	Negative				
(174) IVT Imuno	RV >>>	2	5,7	Negative				
(203) ANTITOXIN	RV >>>	2	5,7	Negative				
(731) Antigen Lu^a		26			26	26	100	
Samples E1 and S1		26			26	26	100	
(14) Bio-Rad	RV >>>	14	54	Negative				
(64) Exbio Olomouc	RV >>>	1	3,8	Negative				
(80) DiaMed	RV >>>	1	3,8	Negative				
(159) Grifols	RV >>>	5	19	Negative				
(172) Immucor	RV >>>	3	12	Negative				
(173) Sanguin	RV >>>	1	3,8	Negative				
(203) ANTITOXIN	RV >>>	1	3,8	Negative				
Samples E2 and S2		26			26	26	100	
(14) Bio-Rad	RV >>>	14	54	Negative				
(64) Exbio Olomouc	RV >>>	1	3,8	Negative				
(80) DiaMed	RV >>>	1	3,8	Negative				
(159) Grifols	RV >>>	5	19	Negative				
(172) Immucor	RV >>>	3	12	Negative				
(173) Sanguin	RV >>>	1	3,8	Negative				
(203) ANTITOXIN	RV >>>	1	3,8	Negative				
(732) Antigen Lu^b		25			25	25	100	
Samples E1 and S1		25			25	25	100	
(14) Bio-Rad	RV >>>	11	44	Positive				
(64) Exbio Olomouc	RV >>>	1	4	Positive				
(80) DiaMed	RV >>>	2	8	Positive				
(159) Grifols	RV >>>	5	20	Positive				
(172) Immucor	RV >>>	3	12	Positive				
(173) Sanguin	RV >>>	1	4	Positive				
(203) ANTITOXIN	RV >>>	1	4	Positive				
(999) another manufacturer	RV >>>	1	4	Positive				
Samples E2 and S2		25			25	25	100	
(14) Bio-Rad	RV >>>	11	44	Positive				
(64) Exbio Olomouc	RV >>>	1	4	Positive				
(80) DiaMed	RV >>>	2	8	Positive				
(159) Grifols	RV >>>	5	20	Positive				
(172) Immucor	RV >>>	3	12	Positive				
(173) Sanguin	RV >>>	1	4	Positive				
(203) ANTITOXIN	RV >>>	1	4	Positive				
(999) another manufacturer	RV >>>	1	4	Positive				
(726) Antigen P1		29			29	29	100	
Samples E1 and S1		29			29	29	100	
(6) APR	RV >>>	1	3,4	Negative				
(14) Bio-Rad	RV >>>	9	31	Negative				
(64) Exbio Olomouc	RV >>>	2	6,9	Negative				
(159) Grifols	RV >>>	1	3,4	Negative				
(172) Immucor	RV >>>	8	28	Negative				
(173) Sanguin	RV >>>	5	17	Negative				
(174) IVT Imuno	RV >>>	1	3,4	Negative				
(203) ANTITOXIN	RV >>>	2	6,9	Negative				
Samples E2 and S2		29			29	29	100	
(6) APR	RV >>>	1	3,4	Positive				
(14) Bio-Rad	RV >>>	9	31	Positive				

EQA round: IH4/23 - Blood Group Serology

Deadline: 17.11.2023

Setup: groups - R (manufacturer of kit)

Test Sample Group	Frequency of the results					Success		
	AV	N _{tot}	N _{rel} [%]	Result	N _{eva}	N _{suc}	S _{rel} [%]	
(64) Exbio Olomouc	RV	>>>	2	6,9	Positive			
(159) Grifols	RV	>>>	1	3,4	Positive			
(172) Immucor	RV	>>>	8	28	Positive			
(173) Sanguin	RV	>>>	5	17	Positive			
(174) IVT Imuno	RV	>>>	1	3,4	Positive			
(203) ANTITOXIN	RV	>>>	2	6,9	Positive			
(740) Antigen Wr^a			7			7	7	100
Samples E1 and S1			7			7	7	100
(159) Grifols	RV	>>>	2	29	Negative			
(172) Immucor	RV	>>>	2	29	Negative			
(173) Sanguin	RV	>>>	3	43	Negative			
Samples E2 and S2			7			7	7	100
(159) Grifols	RV	>>>	2	29	Negative			
(172) Immucor	RV	>>>	2	29	Negative			
(173) Sanguin	RV	>>>	3	43	Negative			
(737) Direct Coombs (antiglobulin) test			140			140	140	100
Samples E1 and S1			140			140	140	100
(14) Bio-Rad	RV	>>>	63	45	Negative			
(40) Ortho Clinical Diagnostics	RV	>>>	1	0,7	Negative			
(64) Exbio Olomouc	RV	>>>	2	1,4	Negative			
(80) DiaMed	RV	>>>	24	17	Negative			
(159) Grifols	RV	>>>	48	34	Negative			
(174) IVT Imuno	RV	>>>	1	0,7	Negative			
(203) ANTITOXIN	RV	>>>	1	0,7	Negative			
Samples E2 and S2			140			140	140	100
(14) Bio-Rad	RV	>>>	63	45	Negative			
(40) Ortho Clinical Diagnostics	RV	>>>	1	0,7	Negative			
(64) Exbio Olomouc	RV	>>>	2	1,4	Negative			
(80) DiaMed	RV	>>>	24	17	Negative			
(159) Grifols	RV	>>>	48	34	Negative			
(174) IVT Imuno	RV	>>>	1	0,7	Negative			
(203) ANTITOXIN	RV	>>>	1	0,7	Negative			
(741) Antibody screening (IAT, blood donor)			87			87	87	100
Samples E1 and S1			87			87	87	100
(6) APR	RV	>>>	4	4,6	Positive			
(14) Bio-Rad	RV	>>>	32	37	Positive			
(64) Exbio Olomouc	RV	>>>	1	1,1	Positive			
(80) DiaMed	RV	>>>	12	14	Positive			
(159) Grifols	RV	>>>	24	28	Positive			
(172) Immucor	RV	>>>	14	16	Positive			
Samples E2 and S2			87			87	87	100
(6) APR	RV	>>>	4	4,6	Positive			
(14) Bio-Rad	RV	>>>	32	37	Positive			
(64) Exbio Olomouc	RV	>>>	1	1,1	Positive			
(80) DiaMed	RV	>>>	12	14	Positive			
(159) Grifols	RV	>>>	24	28	Positive			
(172) Immucor	RV	>>>	14	16	Positive			
(743) Antibody screening (IAT, recipient)			151			151	150	99
Samples E1 and S1			151			151	151	100
(6) APR	RV	>>>	1	0,7	Positive			
(14) Bio-Rad	RV	>>>	67	44	Positive			
(40) Ortho Clinical Diagnostics	RV	>>>	1	0,7	Positive			
(80) DiaMed	RV	>>>	25	17	Positive			
(159) Grifols	RV	>>>	51	34	Positive			
(172) Immucor	RV	>>>	6	4	Positive			
Samples E2 and S2			151			151	150	99
(6) APR	RV	>>>	1	0,7	Positive			
(14) Bio-Rad	RV	>>>	67	44	Positive			
(40) Ortho Clinical Diagnostics	RV	>>>	1	0,7	Positive			
(80) DiaMed	RV	>>>	25	17	Positive			
(159) Grifols	RV	>>>	1	0,7	Not specified			
(172) Immucor	RV	>>>	50	33	Positive			
(172) Immucor	RV	>>>	6	4	Positive			
(745) Antibody screening (IAT, pregnant)			121			121	121	100
Samples E1 and S1			121			121	121	100
(6) APR	RV	>>>	1	0,8	Positive			
(14) Bio-Rad	RV	>>>	53	44	Positive			
(40) Ortho Clinical Diagnostics	RV	>>>	1	0,8	Positive			
(64) Exbio Olomouc	RV	>>>	1	0,8	Positive			

EQA round: IH4/23 - Blood Group Serology

Deadline: 17.11.2023

Setup: groups - R (manufacturer of kit)

Test Sample Group	Frequency of the results					Success		
	AV	N _{tot}	N _{rel} [%]	Result	N _{eva}	N _{suc}	S _{rel} [%]	
(80) DiaMed	RV	>>>	18	15	Positive			
(159) Grifols	RV	>>>	42	35	Positive			
(172) Immucor	RV	>>>	5	4,1	Positive			
Samples E2 and S2			121			121	121	100
(6) APR	RV	>>>	1	0,8	Positive			
(14) Bio-Rad	RV	>>>	53	44	Positive			
(40) Ortho Clinical Diagnostics	RV	>>>	1	0,8	Positive			
(64) Exbio Olomouc	RV	>>>	1	0,8	Positive			
(80) DiaMed	RV	>>>	18	15	Positive			
(159) Grifols	RV	>>>	42	35	Positive			
(172) Immucor	RV	>>>	5	4,1	Positive			
(747) Antibody screening (enzyme test)			113			113	113	100
Samples E1 and S1			113			113	113	100
(14) Bio-Rad	RV	>>>	50	44	Positive			
(40) Ortho Clinical Diagnostics	RV	>>>	1	0,9	Positive			
(80) DiaMed	RV	>>>	20	18	Positive			
(159) Grifols	RV	>>>	41	36	Positive			
(172) Immucor	RV	>>>	1	0,9	Positive			
Samples E2 and S2			113			113	113	100
(14) Bio-Rad	RV	>>>	50	44	Positive			
(40) Ortho Clinical Diagnostics	RV	>>>	1	0,9	Positive			
(80) DiaMed	RV	>>>	20	18	Positive			
(159) Grifols	RV	>>>	41	36	Positive			
(172) Immucor	RV	>>>	1	0,9	Positive			
(750) Antibody identification			52			52	50	96
Samples E1 and S1			52			52	51	98
(0) not specified	RV	>>>	51	98	anti-E; anti-K; anti-S			
			1	1,9	anti-E; anti-S; anti-Fyb			
Samples E2 and S2			52			52	51	98
(0) not specified	RV	>>>	51	98	anti-c			
			1	1,9	anti-c; anti-E; anti-Lua			
(752) Antibody titre, Sample 1: 1st antibody			35			0		
Samples E1 and S1			35			0		
(0) not specified		±	2	5,7	titre 4			
		±	1	2,9	titre 8			
		±	9	26	titre 16			
		±	12	34	titre 32			
		±	8	23	titre 64			
		±	3	8,6	titre 128			
(753) Antibody titre, Sample 1: 2nd antibody			33			0		
Samples E1 and S1			33			0		
(0) not specified		±	1	3	titre 4			
		±	1	3	titre 8			
		±	13	39	titre 16			
		±	13	39	titre 32			
		±	4	12	titre 64			
		±	1	3	titre 128			
(754) Antibody titre, Sample 1: 3rd antibody			35			0		
Samples E1 and S1			35			0		
(0) not specified		±	3	8,6	titre 4			
		±	9	26	titre 8			
		±	15	43	titre 16			
		±	4	11	titre 32			
		±	4	11	titre 64			
(756) Antibody titre, Sample 2: 1st antibody			35			0		
Samples E2 and S2			35			0		
(0) not specified		±	2	5,7	titre 1			
		±	7	20	titre 2			
		±	11	31	titre 4			
		±	11	31	titre 8			
		±	3	8,6	titre 16			
		±	1	2,9	titre 64			
Set 3								
(760) Crossmatch			134			134	133	99
Sample S1			134			134	134	100
All results	RV	>>>	134	100	Crossmatch successful			
Sample S2			134			134	133	99
All results			1	0,7	Crossmatch not successful			

EQA round: IH4/23 - Blood Group Serology

Deadline: 17.11.2023

Setup: groups - R (manufacturer of kit)

Test Sample Group	Frequency of the results				Success		
	AV	N _{tot}	N _{rel} [%]	Result	N _{eva}	N _{suc}	S _{rel} [%]
	RV	>>>	133	99	Crossmatch successful		
(761) Crossmatch (segment K1)			134		134	133	99
Sample S1			134		134	134	100
(0) not specified	RV	>>>	134	100	Positive test		
Sample S2			134		134	133	99
(0) not specified			1	0,7	Not specified		
		>	1	0,7	Negative test		
	RV	>>>	132	99	Positive test		
(762) Serve transfusion product? (segment K1) (transfusion in non-emergency mode)			134		0		
Sample S1			134		0		
(0) not specified	±		133	99	Impossible, risk of haemolysis		
	±		1	0,7	Decision depends on results of other tests not performed in our laboratory		
Sample S2			134		0		
(0) not specified	±		133	99	Impossible, risk of haemolysis		
	±		1	0,7	Decision depends on results of other tests not performed in our laboratory		
(764) Crossmatch (segment K2)			134		134	134	100
Sample S1			134		134	134	100
(0) not specified	RV	>>>	134	100	Positive test		
Sample S2			134		134	134	100
(0) not specified	RV	>>>	134	100	Negative test		
(765) Serve transfusion product? (segment K2) (transfusion in non-emergency mode)			134		0		
Sample S1			134		0		
(0) not specified	±		132	99	Impossible, risk of haemolysis		
	±		2	1,5	Decision depends on results of other tests not performed in our laboratory		
Sample S2			134		0		
(0) not specified	±		78	58	Decision depends on results of other tests not performed in our laboratory		
	±		4	3	Only if more suitable products are not available		
	±		52	39	Possible		