

PKU-controls RIVM survey 2012-1

Specimen nr	B426	B427	B428	B429	B430	Method	Remarks
Nominal mmol/l blood	64	114	139	264	164		
Amsterdam	53	84	107	205	128	MS/MS PE underivatized	
Bilthoven	57	98	123	256	158	MS/MS PE underivatized	
Capelle	53	94	118	218	140	MS/MS PE underivatized	
Tilburg	52	97	104	224	137	MS/MS PE underivatized	
Zwolle	51	92	119	229	137	MS/MS PE underivatized	
Antwerpen	70	121	140	277	170	MS/MS PE underivatized	
Brussel ULB	59	114	143	255	160	MS/MS Derivatized	
Brussel UCL	48	82	100	187	112	MS/MS Derivatized	
Liege	64	107	124	227	133	MS/MS Derivatized	
Luxembourg	63	111	140	262	155	MS/MS PE underivatized	
Bio-Rad	94	155	178	303	197	Quantase	
Perkin Elmer	68	106	123	216	143	Victor-Delfia	
CDC	--	--	--	--	--		
Izmir	66	107	135	235	173	Biochrom AA	
x	61	105	127	238	149		
cv %	19	17	16	13	14		

observed/expected (%)	B426	B427	B428	B429	B430	mean	Remarks
Amsterdam	83	74	77	78	78	78	
Bilthoven	89	86	88	97	96	91	
Capelle	83	82	85	83	85	84	
Tilburg	81	85	75	85	84	82	
Zwolle	80	81	86	87	84	83	
Antwerpen	109	106	101	105	104	105	
Brussel ULB	92	100	103	97	98	98	
Brussel UCL	75	72	72	71	68	72	
Liege	99	93	89	86	81	90	
Luxembourg	98	98	101	99	94	98	
Bio-Rad	148	136	128	115	120	129	
Perkin Elmer	106	93	88	82	87	91	
CDC	--	--	--	--	--	--	
Izmir	103	94	97	89	105	98	

diverse controle's

controle inzender	controle ronde	lot kit	lot calibrator	method
Amsterdam	2012/1	612659	611987	MSMS neobase
Bilthoven	2012/1	612659	611987	NeoBase non-derivatized
Capelle	2012/1	612659	87AC612115	PE Neobase Non Deriv.
Tilburg	2012/1	612659	87 AC612115	MS MS
Zwolle	2012/1	612659	611987	MS/MS PE underivatized
Antwerpen	2012/1	612659	611987	NeoBase
Brussel ULB	2012/1	0	0	LC-MS/MS derivatized
Brussel UCL	2012/1	0	0	MSMS non kit - derivatized
Liege	2012/1	0	0	Chromsystems derivatized
Luxembourg	2012/1	612659	611987	MSMS nonderivatized
Bio-rad	2012/1	0	1693	0
Perkin Elmer	2012/1	613665	0	Fluorometric
CDC	2012/1	0	0	0
Izmir	2012/1	Biochrom	Sigma	Biochrom AAA

T4-TBG-controls RIVM survey 2012-1

Specimen nr	B426	B427	B428	B429	B430	Method	Remarks
Nominal T4 nmol/l blood	150	72	90	54	18		
Amsterdam	144	66	78	49	13	AutoDelfia	
Bilthoven	148	69	90	44	18	AutoDelfia	
Capelle	140	67	81	49	16	AutoDelfia	
Tilburg	172	67	85	48	13	AutoDelfia	
Zwolle	133	62	75	52	14	AutoDelfia	
Brussel ULB	--	--	--	--	--	AutoDelfia	
CDC	143	60	77	48	10	PerkinElmer Delfia	
Bio-rad	--	--	--	--	--	Quantase	
Perkin Elmer	107	65	72	46	15	AutoDelfia	
Izmir	118	54	72	47	15	Neogenesis	
x	141	65	80	48	14		
sd	18	3	6	2	2		
vc %	13	5	7	5	17		

observed/expected (%)	B426	B427	B428	B429	B430	mean	Remarks
Amsterdam	96	92	87	91	--	91	
Bilthoven	99	96	100	81	--	94	
Capelle	93	93	90	91	--	92	
Tilburg	115	93	94	89	--	98	
Zwolle	89	86	83	96	--	89	
Brussel ULB	--	--	--	--	--	--	
CDC	95	83	86	89	--	88	
Bio-rad	--	--	--	--	--	--	
Perkin Elmer	71	91	80	85	--	82	
Izmir	78	75	80	87	--	80	

SD-value

	B426	B427	B428	B429	B430	Remarks
Amsterdam	3,2	-1,0	-0,4	-1,9	-3,8	
Bilthoven	3,1	-1,0	0,1	-2,3	-3,6	
Capelle	2,0	-1,4	-0,8	-2,3	-3,8	
Tilburg	4,2	-1,1	-0,2	-2,1	-3,9	
Zwolle	2,2	-1,4	-0,8	-1,9	-3,8	

Classification based on T4

	B426	B427	B428	B429	B430	Remarks
Amsterdam	1	4	1	4	3	
Bilthoven	1	1	1	4	3	
Capelle	1	1	1	4	3	
Tilburg	1	4	1	4	3	
Zwolle	1	1	1	4	3	
Brussel ULB	--	--	--	--	--	

Key for classification:
 1=negative
 2=CHT possible
 3=CHT probable
 4=no conclusion (yet)
 5=not relevant

diverse controle's

controle inzender	controle ronde	lot kit	lot calibrator	method
Amsterdam	2012/1	612628	612375	AD
Bilthoven	2012/1	612316	610824	AutoDelfia
Capelle	2012/1	613667	612375	AutoDelfia
Tilburg	2012/1	610840	610014	GSP
Zwolle	2012/1	611837	610824	AutoDelfia
Brussel ULB	2012/1	0	00.01.1900	0
CDC	2012/1	614342	CDC	PerkinElmer DELFIA
Bio-rad	2012/1	0	0	0
Perkin Elmer	2012/1	613667	0	AutoDELFLIA
Izmir	16.Mar.12	0	0	Neogenesis

expected classifications with measured concentrations				
B426	B427	B428	B429	B430
1	1	1	4	3
1	1	1	4	3
1	1	1	4	3
1	1	1	4	3
1	1	1	4	3

	Action based on T4					Remarks
	B426	B427	B428	B429	B430	
Amsterdam	1	2	1	3	4	
Bilthoven	1	2	1	3	4	
Capelle	1	2	2	3	4	
Tilburg	1	2	1	3	4	
Zwolle	1	2	1	3	4	
Brussel ULB	--	--	--	--	--	

Key for action:
 1=none
 2=TSH-analysis
 3=TSH- + TBG-analysis
 4=TSH- + TBG-analysis + referral
 5=request for 2nd specimen
 6=referral to paediatrician

expected actions wrt measured concentrations				
B426	B427	B428	B429	B430
1	2	1	3	4
1	2	1	3	4
1	2	2	3	4
1	2	1	3	4
1	2	2	3	4

Tabel 11 (continued)

Specimen nr	B426	B427	B428	B429	B430	Method	Remarks
Nominal TBG nmol/l serum	34	68	135	270	540		
Amsterdam	29	46	126	221	451	Eiken	
Bilthoven	44	82	134	264	>500	Eiken	
Capelle	56	64	120	222	460	Eiken	
Tilburg	35	53	130	232	440	Eiken	
Zwolle	42	86	150	306	>540	Eiken	

observed/expected (%)						mean	Remarks
Amsterdam	--	68	93	82	84	82	
Bilthoven	--	121	99	98	--	106	
Capelle	--	95	89	82	85	88	
Tilburg	--	79	96	86	81	86	
Zwolle	--	127	111	113	--	117	

T4/TBG ratio					
Amsterdam	--	--	--	14,5	--
Bilthoven	-	-	-	10,6	<5
Capelle	nvt	nvt	nvt	12,6	2,8
Tilburg	--	--	--	12,9	2,7
Zwolle	xx	43,0	28,7	10,5	2,6

Classification based on T4/TBG ratio

						Remarks
Amsterdam	--	--	--	--	--	
Bilthoven	-	-	-	2	5	
Capelle	nvt	nvt	nvt	2	5	
Tilburg	--	--	--	2	2	
Zwolle	5	5	5	2	5	

Action based on T4/TBG ratio

						Remarks
Amsterdam	--	--	--	--	--	
Bilthoven	-	-	-	5	1	
Capelle	nvt	nvt	nvt	5	1	
Tilburg	--	--	--	5	1	
Zwolle	1	1	1	5	1	

expected classifications wrt measured concentrations				
B426	B427	B428	B429	B430
5	5	5	2	5
5	5	5	2	5
5	5	5	2	5
5	5	5	2	5
5	5	5	2	5

expected actions wrt measured concentrations				
B426	B427	B428	B429	B430
1	1	1	5	1
1	1	1	5	1
1	1	1	5	1
1	1	1	5	1
1	1	1	5	1

TSH-controls RIVM survey 2012-1

Specimen nr	B426	B427	B428	B429	B430 Method	Remarks
Nominal mIU/l blood	0	12	18	20	40	
Amsterdam	<1	10	14	16	36 BRAHMS	
Bilthoven	1	12	19	22	40 AutoDelfia	
Capelle	1	11	17	18	36 AutoDelfia	
Tilburg	<1	10	15	14	34 AutoDelfia	
Zwolle	<1	10	16	17	32 AutoDelfia	
Antwerpen	<1	11	15	19	39 GSP	
Brussel ULB	--	12	16	19	35 AutoDelfia	
Brussel UCL	1	19	21	27	46 BioRad Quantase	
Liege	--	14	21	27	49 ELISA home made	
Luxembourg	0	11	17	23	40 AutoDelfia	
Bio-rad	1	12	20	21	50 Quantase	
Perkin Elmer	--	12	18	22	40 AutoDelfia	
CDC	--	9	14	15	30 Delfia	
Izmir	1	8	15	17	37 Neogenesis	
x	1,0	11,5	17,0	19,7	38,7	
sd	0	2	2	4	6	
cv %	43	21	13	19	15	

observed/expected (%)	B426	B427	B428	B429	B430	mean	Remarks
Amsterdam	--	83	78	80	90	83	
Bilthoven	--	100	106	110	100	104	
Capelle	--	92	94	90	90	92	
Tilburg	--	83	83	70	85	80	
Zwolle	--	83	89	85	80	84	
Antwerpen	--	92	83	95	98	92	
Brussel ULB	--	99	91	96	86	93	
Brussel UCL	--	155	117	133	114	130	
Liege	--	118	114	133	121	122	
Luxembourg	--	95	94	115	100	101	
Bio-rad	--	102	108	104	125	110	
Perkin Elmer	--	96	102	109	100	102	
CDC	--	74	78	76	75	76	
Izmir	--	67	83	84	92	82	

diverse controle's

controle inzender	controle ronde	lot kit	lot calibrator	method
Amsterdam	2012/1	0	st. 13-1-12	Brahms
Bilthoven	2012/1	612701	612100	AutoDelfia
Capelle	2012/1	614204	613759	AutoDelfia
Tilburg	2012/1	614158	613460	GSP
Zwolle	2012/1	613552	613123	AutoDelfia
Antwerpen	2012/1	613806	613460	GSP
Brussel ULB	2012/1	613552	02.09.3578	AutoDelfia
Brussel UCL	2012/1	187	0	Biorad
Liege	2012/1	0	0	ELISA home made
Luxembourg	2012/1	611285	610139	AutoDelfia
Bio-rad	2012/1	190	0	0
Perkin Elmer	2012/1	614712	0	AutoDELFLIA
CDC	2012/1	613937	CDC	PerkinElmer DELFLIA
Izmir	2012/1	0	0	Neogenesis

Specimen nr	Classification					Remarks
	B426	B427	B428	B429	B430	
Amsterdam	1	2	2	2	3	
Bilthoven	1	2	2	3	3	
Capelle	1	2	2	2	3	
Tilburg	1	2	2	2	3	
Zwolle	1	2	2	2	3	
Antwerpen	1	1	2	2	3	
Brussel ULB	1	1	2	2	3	
Brussel UCL	1	2	2	3	3	
Liège	1	1	2	3	3	
Luxembourg	1	1	2	3	3	
Bio-rad	1	2	2	3	3	
Wallac	--	--	--	--	--	
CDC	1	1	3	3	3	
Izmir	1	1	2	3	3	

Key for classification
1=negative
2=CHT possible
3=CHT probable

expected classifications with measured concentrations					
B426	B427	B428	B429	B430	
1	2	2	2	3	
1	2	2	3	3	
1	2	2	2	3	
1	2	2	2	3	
1	2	2	2	3	
1	2	2	2	3	
--	2	2	2	3	
1	2	2	3	3	
--	2	2	3	3	
1	2	2	3	3	
1	2	2	2	3	
--	2	2	3	3	
--	2	2	2	3	
1	2	2	2	3	

Specimen nr	Action (based only on TSH)					Remarks
	B426	B427	B428	B429	B430	
Amsterdam	1	5	5	5	6	
Bilthoven	1	5	5	6	6	
Capelle	1	5	5	5	6	
Tilburg	1	5	5	5	6	
Zwolle	1	5	5	5	6	
Antwerpen	1	1	5	5	5	
Brussel ULB	1	1	5	5	6	
Brussel UCL	1	5	5	6	6	
Liège	1	1	5	5	6	
Luxembourg	1	1	5	6	6	
Bio-rad	--	--	--	--	--	
Perkin Elmer	--	--	--	--	--	
CDC	--	--	--	--	--	
Izmir	1	1	5	4	6	

Key for action
1=none
4=repeat analysis in same specimen
5=request for 2nd specimen
6=referral to paediatrician
7=T4-analysis

expected actions wrt measured concentrations					
B426	B427	B428	B429	B430	
1	5	5	5	6	
1	5	5	6	6	
1	5	5	5	6	
1	5	5	5	6	
1	5	5	5	6	
1	5	5	5	6	
--	5	5	5	6	
1	5	5	6	6	
--	5	5	6	6	
1	5	5	6	6	
1	5	5	5	6	
--	5	5	6	6	
--	5	5	5	6	
1	5	5	5	6	

OHP-controls RIVM survey 2012-1

Specimen nr	B426	B427	B428	B429	B430 Method	Remarks
Nominal nmol/l blood	2	14	20	52	27	
Amsterdam	2	9	13	34	20 AutoDelfia	
Bilthoven	2	9	14	39	18 AutoDelfia	
Capelle	3	7	13	39	16 AutoDelfia	
Tilburg	1	8	11	39	16 AutoDelfia	
Zwolle	2	9	14	35	17 AutoDelfia	
Antwerpen	3	10	13	41	20 AutoDelfia	
Brussel ULB	2	10	16	37	20 AutoDelfia	
Brussel UCL	--	--	--	--	--	
Liege	21	39	39	73	49 ELISA home made	
Luxembourg	2	9	15	42	23 AutoDelfia	
Bio-rad	5	18	23	57	44 Quantase	
Perkin Elmer	1	9	13	36	20 AutoDelfia	
CDC	--	--	--	--	-- AutoDelfia	
Izmir	5	11	17	55	29 Neogenesis	
x	4	12	17	44	24	
sd	5,3	8,3	7,4	11,3	10,5	
cv %	129	68	44	26	43	

observed/expected (%)	B426	B427	B428	B429	B430	mean	Remarks
Amsterdam	--	64	64	66	75	68	
Bilthoven	--	64	69	76	68	69	
Capelle	--	50	64	76	60	63	
Tilburg	--	57	54	76	60	62	
Zwolle	--	64	69	68	64	66	
Antwerpen	--	71	64	80	75	73	
Brussel ULB	--	74	77	71	77	75	
Brussel UCL	--	--	--	--	--	--	
Liege	--	275	195	142	184	199	
Luxembourg	--	64	73	81	86	76	
Bio-rad	--	129	114	111	166	130	
Perkin Elmer	--	61	64	70	76	68	
CDC	--	--	--	--	--	--	
Izmir	--	78	83	107	111	95	

diverse controle's

controle inzender	controle ronde	lot kit	lot calibrator	method
Amsterdam	2012/1	613021	612474 AD	
Bilthoven	2012/1	612732	612113 AutoDelfia	
Capelle	2012/1	614244	614041 AutoDelfia	
Tilburg	2012/1	614294	612113 GSP	
Zwolle	2012/1	613881	613676 AutoDelfia	
Antwerpen	2012/1	613355	612244 GSP	
Brussel ULB	2012/1	613422	613111 AutoDelfia	
Brussel UCL	2012/1	0	0 0	
Liege	2012/1	0	0 ELISA home made	
Luxembourg	2012/1	613021	612474 AutoDelfia	
Bio-rad	2012/1	126	0 0	
Perkin Elmer	2012/1	614593	0 AutoDELFIA	
CDC	2012/1	0	0 0	
Izmir	2012/1	0	0 Neogenesis	

Classification

Specimen nr	B426	B427	B428	B429	B430	Remarks
Amsterdam	1	1	1	2	1	
Bilthoven	1	1	1	2	1	
Capelle	1	1	1	2	1	
Tilburg	1	1	1	2	1	
Zwolle	1	1	1	2	1	
Antwerpen	1	1	1	3	1	
Brussel ULB	1	1	1	3	1	
Brussel UCL	--	--	--	--	--	
Liège	1	1	1	2	1	
Luxembourg	1	1	1	3	1	
Bio-rad	1	1	1	2	2	
Perkin Elmer	--	--	--	--	--	
CDC	--	--	--	--	--	
Izmir	1	1	1	3	1	

Key for classification
 1=negative
 2=CAH possible
 3=CAH probable

expected classifications with measured concentrations				
B426	B427	B428	B429	B430
1	1	1	2	1
1	1	1	2	1
1	1	1	2	1
1	1	1	2	1
1	1	1	2	1
1	1	1	2	1
1	1	1	2	1
--	--	--	--	--
1	2	2	3	2
1	1	1	2	1
1	1	1	3	2
1	1	1	2	1
--	--	--	--	--
1	1	1	3	2