

Survey: **NBS2/20**  
month: **May 2020**  
Participant-No: **9900667**  
date of issue: **02.05.20**

Tijen Tanyalcin MD,PH  
Tanyalcin Tip laboratuvari  
Kizilkanat Sag lik Sitisi B Blok kat 1  
1359 sokak no 4/3  
35220 ALSANCAK, IZMIR  
TURKEY



Survey directors

Prof. Dr. C. Knabbe  
Prof. Dr. Dr. K.P. Kohse  
Prof. Dr. M. Neumaier

Head of RfB

Dr. W. J. Geilenkeuser  
Dr. A. Kessler

Bonn, 29. May 2020

## Certificate

We confirm that you have participated in the survey for neonatal screening.

You have met the requirements of the survey for the following analytes:

TSH (2) | IRT (2)

**This certificate is according to the current version of the RiliBÄK valid until the end of November 2020.**



The number in parentheses characterizes the analytical method used.

The assignment of the number to the respective method and/or the respective instrument is to be taken from the total evaluation.



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Referenzinstitut für Bioanalytik

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Bonn, 29. May 2020

## Participation certificate

We confirm that you have participated in the survey for neonatal screening.

The analytes determined by you are as follows:

TSH (2) | 17-OH-progesterone (2) | IRT (2)

The number in parentheses characterizes the analytical method used.  
The assignment of the number to the respective method and/or the respective instrument is to be taken from the total evaluation.



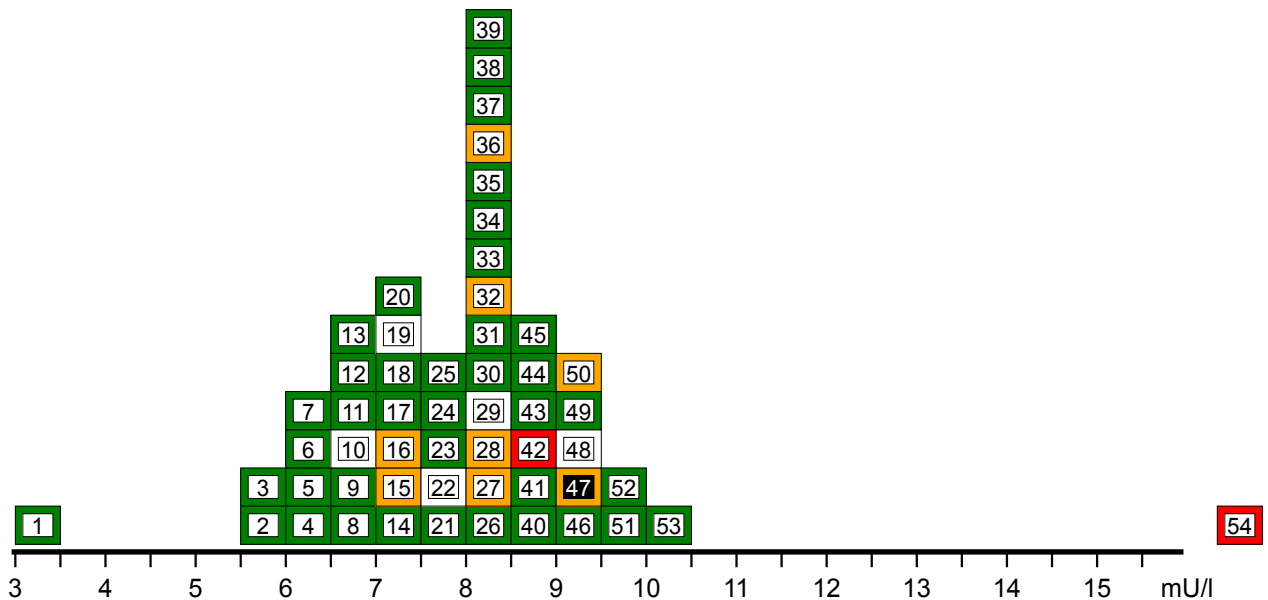




Findings NBS2/20 -May 2020-  
Neonatal - Screening, TSH, Sample A  
Participant No 9900667



<b>Legend:</b>	N = number of results	<span style="border: 1px solid black; padding: 2px;">rn</span> = result box/result code no.	= 16. bis 84. percentile with median
	XM = mean value	<span style="border: 1px solid green; padding: 2px;">rn</span> <span style="border: 1px solid orange; padding: 2px;">rn</span> = normal   CH/AGS/CF possible	CH = congenital hypothyroidism
	SD = standard deviation	<span style="border: 1px solid red; padding: 2px;">rn</span> <span style="border: 1px solid black; padding: 2px;">rn</span> = CH/AGS/CF evident   other	AGS = adrenogen. syndrome
	CV = coefficient of variation		CF = cystic fibrosis
	M = method number		<span style="border: 1px solid black; padding: 2px;">rn</span> = marks your result box



Descriptive Statistics	Statistics of classifications		Statistics of Implications, related to Classifications					
	normal	CH/AGS/CF possible	CH/AGS/CF evident	other	none	new card	plasma sample	other
N = 54	39	8	2	1	39	7	1	
XM= 7,7 mU/l								
SD= 1,2 mU/l								
CV= 15,8 %								

**Kit Evaluation for Sample A**

M	Kit	N	Min	16.P	50.P	84.P	Max		5	10	Kit Classifications			
											<span style="color: green;">■</span>	<span style="color: orange;">■</span>	<span style="color: red;">■</span>	<span style="color: black;">■</span>
All Kits	54	3.00	6.70	<b>8.00</b>	9.00	27.9					39	8	2	1
2	9	2	6.70	<b>8.00</b>		9.30					0	1	0	0
3	350	2	8.00	<b>9.10</b>		10.2					1	0	0	0
4	245	15	5.89	6.36	<b>7.57</b>	8.48	9.20				13	0	1	0
4	246	8	3.00	4.14	<b>6.70</b>	7.87	8.00				6	2	0	0
4	247	16	6.70	7.00	<b>8.05</b>	9.00	27.9				9	4	1	1
5	77	8	6.70	6.78	<b>8.43</b>	9.59	9.61				8	0	0	0

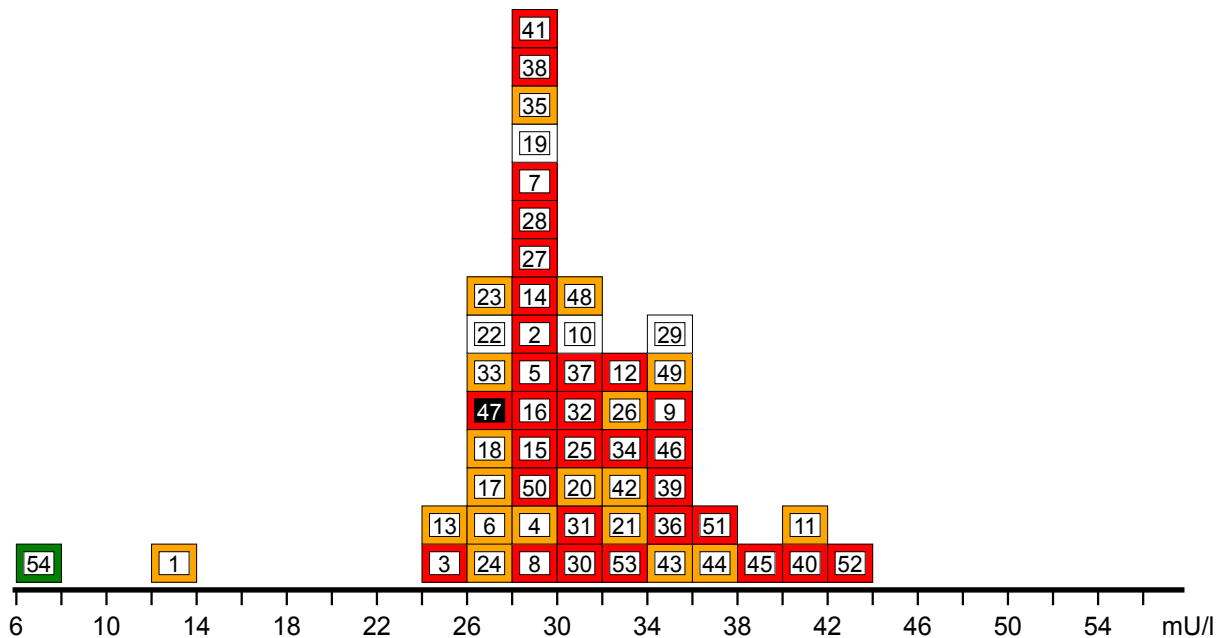
Other Kits: 1 99(1),2 99(1),3 99(1),

The deviation of your result from the total median M and from the median of the corresponding sub-collective (kit) Mu is:

Findings NBS2/20 -May 2020-  
Neonatal - Screening, TSH, Sample B  
Participant No 9900667



<b>Legend:</b>	N = number of results	<span style="border: 1px solid black; padding: 2px;">r n</span> = result box/result code no.	= 16. bis 84. percentile with median
	XM = mean value	<span style="border: 1px solid green; padding: 2px;">r n</span> <span style="border: 1px solid orange; padding: 2px;">r n</span> = normal   CH/AGS/CF possible	CH = congenital hypothyroidism
	SD = standard deviation	<span style="border: 1px solid red; padding: 2px;">r n</span> <span style="border: 1px solid black; padding: 2px;">r n</span> = CH/AGS/CF evident   other	AGS = adrenogen. syndrome
	CV = coefficient of variation		CF = cystic fibrosis
	M = method number		<span style="background-color: black; color: black;">r n</span> = marks your result box



Descriptive Statistics	Statistics of classifications		Statistics of Implications, related to Classifications					
	normal	CH/AGS/CF possible	CH/AGS/CF evident	other	none	new card	plasma sample	other
N = 54	1	19	30		1			
XM= 30,8 mU/l						12	6	1
SD= 4,8 mU/l						3	26	1
CV= 15,6 %								

**Kit Evaluation for Sample B**

M	Kit	N	Min	16.P	50.P	84.P	Max	10	20	30	40	50	Kit Classifications			
													<span style="color: green;">█</span>	<span style="color: orange;">█</span>	<span style="color: red;">█</span>	
All Kits	54	6.70	26.7	<b>30.0</b>	35.2	42.9							1	19	30	0
2	9	2	28.1	<b>29.9</b>		31.7							0	0	1	0
3	350	2	32.0	<b>34.0</b>		35.9							0	0	1	0
4	245	15	24.7	25.9	<b>29.9</b>	32.2	35.9						0	7	7	0
4	246	8	13.0	18.8	<b>27.3</b>	28.8	29.0						0	5	3	0
4	247	16	6.70	28.0	<b>30.0</b>	34.8	36.3						1	5	9	0
5	77	8	32.7	33.1	<b>36.2</b>	41.7	42.9						0	0	8	0

Other Kits: 1 99(1),2 99(1),3 99(1),

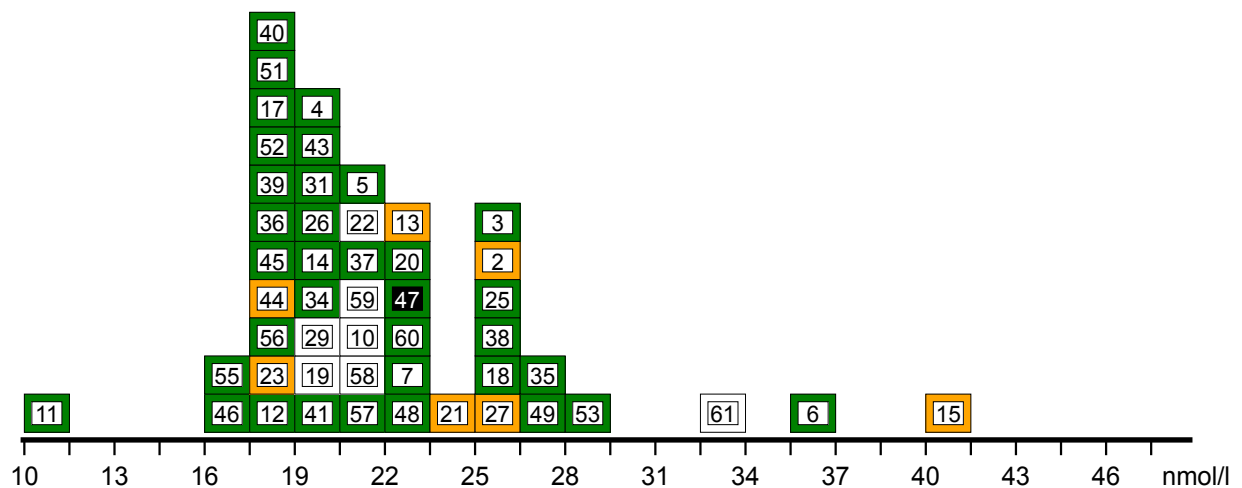
The deviation of your result from the total median M and from the median of the corresponding sub-collective (kit) Mu is:



Findings NBS2/20 -May 2020-  
Neonatal - Screening, 17-OHP, Sample A  
Participant No 9900667



<b>Legend:</b>	N = number of results	<span style="border: 1px solid black; padding: 2px;">r n</span> = result box/result code no.	= 16. bis 84. percentile with median
	XM = mean value	<span style="border: 1px solid green; padding: 2px;">r n</span> <span style="border: 1px solid orange; padding: 2px;">r n</span> = normal   CH/AGS/CF possible	CH = congenital hypothyroidism
	SD = standard deviation	<span style="border: 1px solid red; padding: 2px;">r n</span> <span style="border: 1px solid black; padding: 2px;">r n</span> = CH/AGS/CF evident   other	AGS = adrenogen. syndrome
	CV = coefficient of variation		CF = cystic fibrosis
	M = method number		<span style="border: 1px solid black; padding: 2px;">r n</span> = marks your result box



Descriptive Statistics	Statistics of classifications	Statistics of Implications, related to Classifications			
		none	new card	plasma sample	other
N = 49	<span style="color: green;">■</span> normal 35	35			
XM= 21,9 nmol/l	<span style="color: orange;">■</span> CH/AGS/CF possible 7		5		2
SD= 5,1 nmol/l	<span style="color: red;">■</span> CH/AGS/CF evident				
CV= 23,3 %	other				

**Kit Evaluation for Sample A**

M	Kit	N	Min	16.P	50.P	84.P	Max	Percentiles			Kit Classifications			
								10	20	30	<span style="color: green;">■</span>	<span style="color: orange;">■</span>	<span style="color: red;">■</span>	<span style="color: black;">■</span>
All Kits	49	10.3	18.1	<b>20.8</b>	25.8	41.4					35	7	0	0
2	99	2	10.3	<b>16.4</b>		22.4					2	0	0	0
3	350	3	19.6	<b>20.8</b>		28.4					2	0	0	0
4	245	19	17.6	18.4	<b>21.9</b>	26.2	27.0				16	2	0	0
4	246	6	17.0	<b>22.8</b>		36.0					5	1	0	0
4	247	14	16.4	18.0	<b>20.0</b>	23.8	41.4				8	4	0	0
6	99	3	18.0	<b>20.8</b>		22.1					2	0	0	0

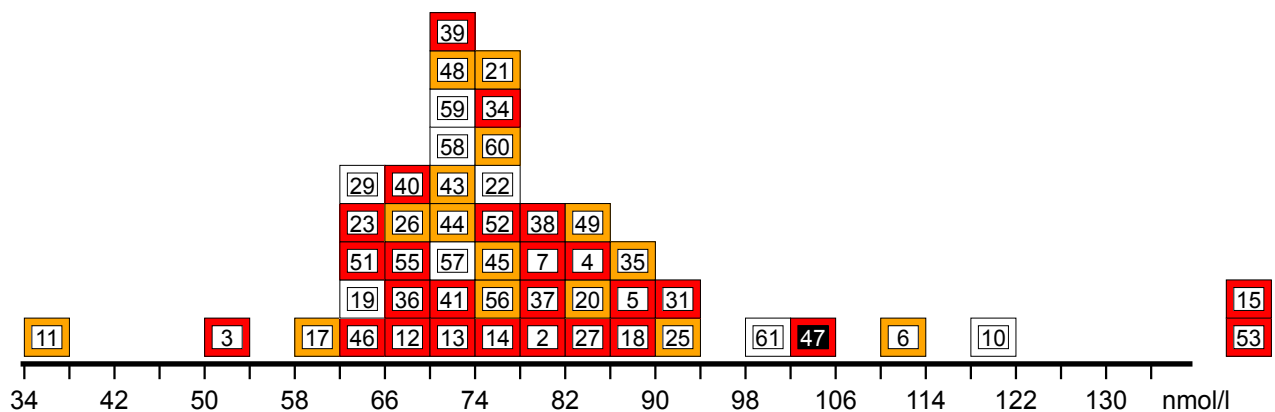
Other Kits: 2 9(1),4 99(1),

The deviation of your result from the total median M	M	Mu
and from the median of the corresponding sub-collective (kit) Mu is:	7.7 %	36 %

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Neonatal - Screening, 17-OHP, Sample B  
Participant No 9900667



<b>Legend:</b>	N = number of results	<span style="border: 1px solid black; padding: 2px;">r n</span> = result box/result code no.	= 16. bis 84. percentile with median
	XM = mean value	<span style="border: 1px solid green; padding: 2px;">r n</span> <span style="border: 1px solid orange; padding: 2px;">r n</span> = normal   CH/AGS/CF possible	CH = congenital hypothyroidism
	SD = standard deviation	<span style="border: 1px solid red; padding: 2px;">r n</span> <span style="border: 1px solid black; padding: 2px;">r n</span> = CH/AGS/CF evident   other	AGS = adrenogen. syndrome
	CV = coefficient of variation		CF = cystic fibrosis
	M = method number		<span style="border: 1px solid black; padding: 2px;">r n</span> = marks your result box



Descriptive Statistics	Statistics of classifications	Statistics of Implications, related to Classifications			
		none	new card	plasma sample	other
N = 49	■ normal				
XM= 79,2 nmol/l	■ CH/AGS/CF possible 15	1	10	2	2
SD= 19,6 nmol/l	■ CH/AGS/CF evident 26		2	17	7
CV= 24,8 %	■ other 1				1

**Kit Evaluation for Sample B**

M	Kit	N	Min	16.P	50.P	84.P	Max	50	100	Kit Classifications
All Kits	49	34.8	65.6	<b>75.2</b>	90.8	146				0 15 26 1
2	99	2	34.8	<b>68.6</b>		102				0 1 1 0
3	350	3	65.6	<b>71.6</b>		144				0 0 1 1
4	245	19	50.4	67.2	<b>76.4</b>	86.3	90.8			0 6 12 0
4	246	6	60.1	<b>81.9</b>		114				0 2 4 0
4	247	14	62.0	63.3	<b>72.1</b>	88.4	146			0 4 8 0
6	99	3	72.7	<b>75.0</b>		76.2				0 2 0 0

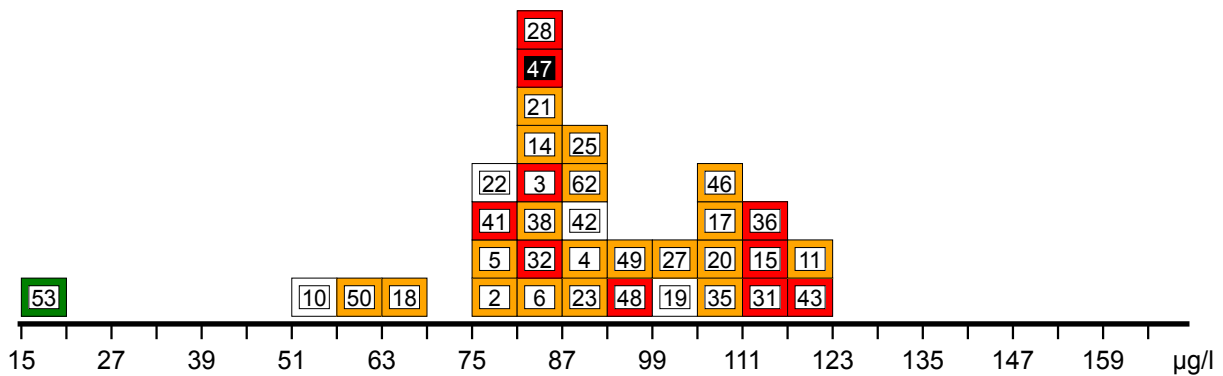
Other Kits: 2 9(1),4 99(1),

The deviation of your result from the total median M and from the median of the corresponding sub-collective (kit) Mu is:	M	Mu
	36 %	49 %

Findings NBS2/20 -May 2020-  
Neonatal - Screening, IRT, Sample A  
Participant No 9900667



<b>Legend:</b>	N = number of results	<span style="border: 1px solid black; padding: 2px;">r n</span> = result box/result code no.	= 16. bis 84. percentile with median
	XM = mean value	<span style="background-color: green; color: white; padding: 2px;">r n</span> <span style="background-color: orange; color: white; padding: 2px;">r n</span> = normal   CH/AGS/CF possible	CH = congenital hypothyroidism
	SD = standard deviation	<span style="border: 2px solid red; padding: 2px;">r n</span> <span style="border: 2px solid black; padding: 2px;">r n</span> = CH/AGS/CF evident   other	AGS = adrenogen. syndrome
	CV = coefficient of variation		CF = cystic fibrosis
	M = method number		<span style="background-color: black; color: white; padding: 2px;">r n</span> = marks your result box



Descriptive Statistics	Statistics of classifications	Statistics of Implications, related to Classifications			
		none	new card	plasma sample	other
N = 34	<span style="color: green;">■</span> normal 1	1			
XM= 88,8 µg/l	<span style="color: orange;">■</span> CH/AGS/CF possible 19		3		16
SD= 20,0 µg/l	<span style="color: red;">■</span> CH/AGS/CF evident 10		1	1	8
CV= 22,6 %	other				

**Kit Evaluation for Sample A**

M	Kit	N	Min	16.P	50.P	84.P	Max	50	100	150	Kit Classifications			
											<span style="color: green;">■</span>	<span style="color: orange;">■</span>	<span style="color: red;">■</span>	<span style="color: black;">■</span>
All Kits	34	34	15.4	78.5	<b>88.9</b>	110	119				1	19	10	0
2	9	2	54.7		<b>58.6</b>		62.4				0	1	0	0
4	245	12	78.9	81.0	<b>91.4</b>	106	109				0	9	1	0
4	246	5	68.5		<b>82.1</b>		90.2				0	4	1	0
4	247	12	80.6	82.9	<b>102</b>	117	118				0	4	7	0

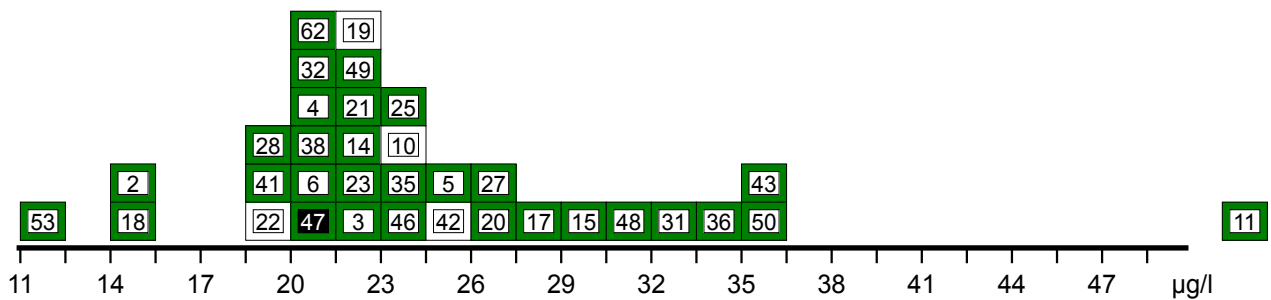
Other Kits: 2 52(1),3 99(1),3 350(1),

The deviation of your result from the total median M	M	Mu
and from the median of the corresponding sub-collective (kit) Mu is:		

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Neonatal - Screening, IRT, Sample B  
Participant No 9900667



<b>Legend:</b>	N = number of results	<span style="border: 1px solid black; padding: 2px;">r n</span> = result box/result code no.	<b>—+—</b> = 16. bis 84. percentile with median
	XM = mean value	<span style="border: 2px solid green; padding: 2px;">r n</span> <span style="border: 2px solid orange; padding: 2px;">r n</span> = normal   CH/AGS/CF possible	CH = congenital hypothyroidism
	SD = standard deviation	<span style="border: 2px solid red; padding: 2px;">r n</span> <span style="border: 1px solid black; padding: 2px;">r n</span> = CH/AGS/CF evident   other	AGS = adrenogen. syndrome
	CV = coefficient of variation		CF = cystic fibrosis
	M = method number		<span style="border: 2px solid black; padding: 2px;">r n</span> = marks your result box



**Descriptive Statistics**

N = 34  
XM= 23,6 µg/l  
SD= 5,7 µg/l  
CV= 24,2 %

**Statistics of classifications**

■ normal 30  
■ CH/AGS/CF possible  
■ CH/AGS/CF evident  
other

**Statistics of Implications, related to Classifications**

none 30    new card    plasma sample    other

**Kit Evaluation for Sample B**

M	Kit	N	Min	16.P	50.P	84.P	Max		10	20	30	40	Kit Classifications			
													<span style="color: green;">■</span>	<span style="color: orange;">■</span>	<span style="color: red;">■</span>	
All Kits	34	34	11.0	19.6	<b>22.6</b>	31.8	53.8						30	0	0	0
2	9	2	24.0		<b>29.5</b>		35.0						1	0	0	0
4	245	12	19.3	20.2	<b>23.2</b>	26.0	28.2						10	0	0	0
4	246	5	14.7		<b>19.7</b>		20.3						5	0	0	0
4	247	12	19.5	20.7	<b>24.8</b>	33.7	35.8						11	0	0	0

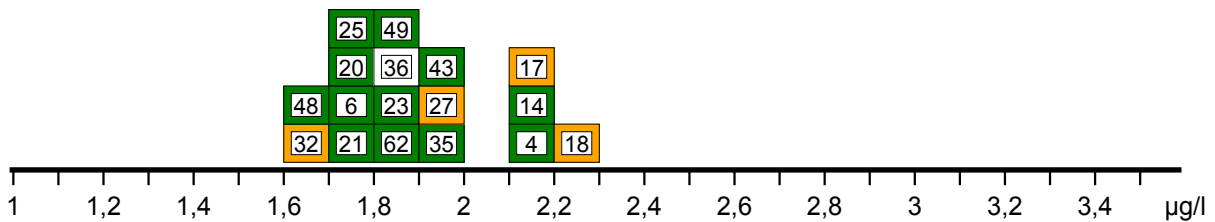
Other Kits: 2 52(1),3 99(1),3 350(1),

The deviation of your result from the total median M and from the median of the corresponding sub-collective (kit) Mu is:

Findings NBS2/20 -May 2020-  
Neonatal - Screening, PAP, Sample A  
Participant No 9900667



<b>Legend:</b>	N = number of results	<span style="border: 1px solid black; padding: 2px;">r n</span> = result box/result code no.	<b>—+—</b> = 16. bis 84. percentile with median
	XM = mean value	<span style="background-color: green; color: white; padding: 2px;">r n</span> <span style="background-color: orange; color: white; padding: 2px;">r n</span> = normal   CH/AGS/CF possible	CH = congenital hypothyroidism
	SD = standard deviation	<span style="border: 2px solid red; padding: 2px;">r n</span> <span style="border: 2px solid black; padding: 2px;">r n</span> = CH/AGS/CF evident   other	AGS = adrenogen. syndrome
	CV = coefficient of variation		CF = cystic fibrosis
	M = method number		<span style="background-color: black; color: white; padding: 2px;">r n</span> = marks your result box



Descriptive Statistics	Statistics of classifications	Statistics of Implications, related to Classifications			
		none	new card	plasma sample	other
N = 17	<span style="color: green;">■</span> normal 12	12			
XM= 1,8 µg/l	<span style="color: orange;">■</span> CH/AGS/CF possible 4		1		3
SD= 0,1 µg/l	<span style="color: red;">■</span> CH/AGS/CF evident				
CV= 9,5 %	other				

**Kit Evaluation for Sample A**

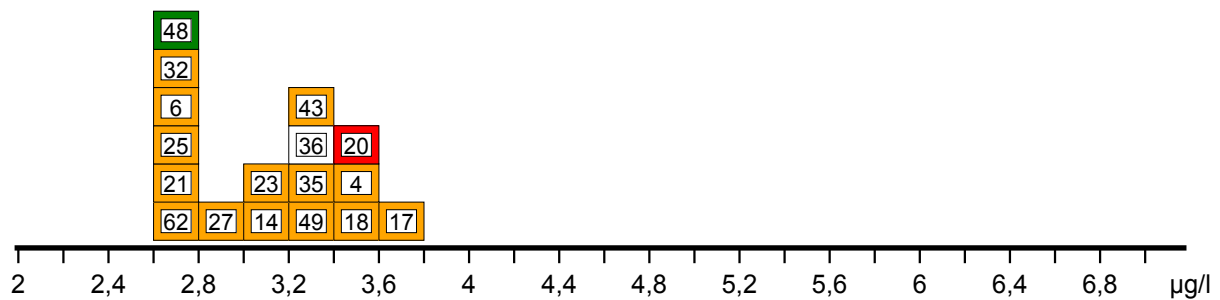
M	Kit	N	Min	16.P	50.P	84.P	Max	0,7	1,4	2,1	2,8	Kit Classifications			
												<span style="color: green;">■</span>	<span style="color: orange;">■</span>	<span style="color: red;">■</span>	<span style="color: black;">■</span>
All Kits	17		1.60	1.69	<b>1.80</b>	2.10	2.20			<b>—+—</b>		12	4	0	0
2	255	3	1.70		<b>1.79</b>		1.90			<b>I</b>		3	0	0	0
4	255	14	1.60	1.64	<b>1.81</b>	2.10	2.20			<b>—+—</b>		9	4	0	0

Other Kits:

Findings NBS2/20 -May 2020-  
Neonatal - Screening, PAP, Sample B  
Participant No 9900667



<b>Legend:</b>	N = number of results	<span style="border: 1px solid black; padding: 2px;">r n</span> = result box/result code no.	<b>—+—</b> = 16. bis 84. percentile with median
	XM = mean value	<span style="background-color: green; color: white; padding: 2px;">r n</span> <span style="background-color: orange; color: white; padding: 2px;">r n</span> = normal   CH/AGS/CF possible	CH = congenital hypothyroidism
	SD = standard deviation	<span style="border: 2px solid red; padding: 2px;">r n</span> <span style="border: 2px solid black; padding: 2px;">r n</span> = CH/AGS/CF evident   other	AGS = adrenogen. syndrome
	CV = coefficient of variation		CF = cystic fibrosis
	M = method number		<span style="background-color: black; color: white; padding: 2px;">r n</span> = marks your result box



Descriptive Statistics	Statistics of classifications	Statistics of Implications, related to Classifications			
		none	new card	plasma sample	other
N = 17	<span style="color: green;">■</span> normal 1	1			
XM= 3,0 µg/l	<span style="color: orange;">■</span> CH/AGS/CF possible 14		3		11
SD= 0,3 µg/l	<span style="color: red;">■</span> CH/AGS/CF evident 1				1
CV= 12,0 %	other				

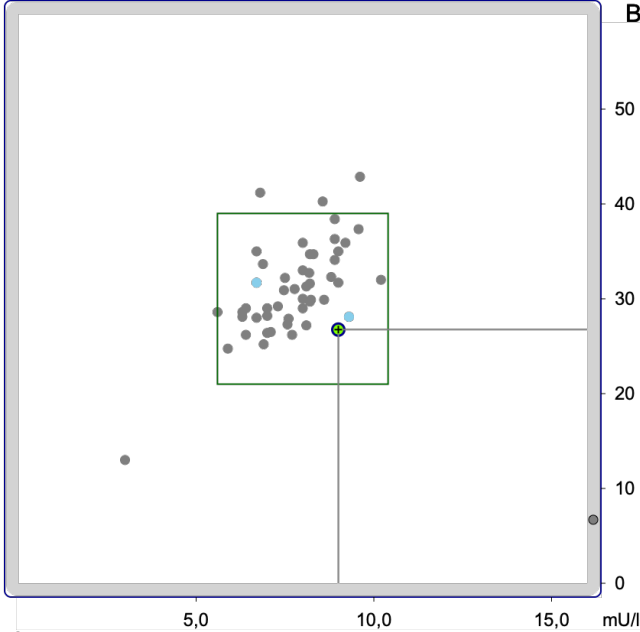
**Kit Evaluation for Sample B**

M	Kit	N	Min	16.P	50.P	84.P	Max	— 1 — 2 — 3 — 4 — 5 —					Kit Classifications			
								<span style="color: green;">■</span>	<span style="color: orange;">■</span>	<span style="color: red;">■</span>	<span style="background-color: black; color: white;">■</span>					
All Kits	17	2.60	2.64	<b>3.15</b>	3.50	3.60			—+—				1	14	1	0
2	255	3	2.60	<b>2.65</b>		3.30							0	3	0	0
4	255	14	2.60	2.69	<b>3.23</b>	3.50	3.60		—+—				1	11	1	0

Other Kits:

Analyte **TSH**  
Method all methods

success rate 94,4 % out of range 1



A

No of participants	54		
sample/unit	A	mU/l	B
mean	7.73		30.9
standard deviation	1.22		4.82
coefficient of variation	15.8		15.6

Sample A [mU/l]

M	Kit	N	Min	16.P	50.P	84.P	Max
Alle	54		3.00	6.70	8.00	9.00	27.9
4	245	15	5.89	6.36	7.57	8.48	9.20
4	246	8	3.00	4.14	6.70	7.87	8.00
4	247	16	6.70	7.00	8.05	9.00	27.9
5	77	8	6.70	6.78	8.43	9.59	9.61

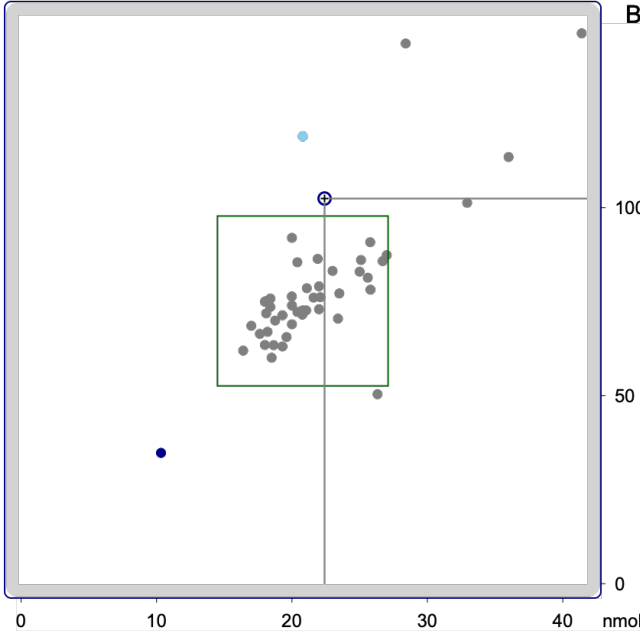
Sample B [mU/l]

M	Kit	N	Min	16.P	50.P	84.P	Max
Alle	54		6.70	26.7	30.0	35.2	42.9
4	245	15	24.7	25.9	29.9	32.2	35.9
4	246	8	13.0	18.8	27.3	28.8	29.0
4	247	16	6.70	28.0	30.0	34.8	36.3
5	77	8	32.7	33.1	36.2	41.7	42.9

Other kits (number):  
1-99(1), 2-09(2), > 2-99(1)<, 3-99(1), 3-350(2)

Analyte **17-OH-progesterone**  
Method all methods

success rate 83,6 % out of range 0



A

No of participants	49		
sample/unit	A	nmol/l	B
mean	22.0		79.3
standard deviation	5.12		19.7
coefficient of variation	23.3		24.9

Sample A [nmol/l]

M	Kit	N	Min	16.P	50.P	84.P	Max
Alle	49		10.3	18.1	20.8	25.8	41.4
2	99	2	10.3		16.4		22.4
3	350	3	19.6		20.8		28.4
4	245	19	17.6	18.4	21.9	26.2	27.0
4	246	6	17.0		22.8		36.0
4	247	14	16.4	18.0	20.0	23.8	41.4
6	99	3	18.0		20.8		22.1

Sample B [nmol/l]

M	Kit	N	Min	16.P	50.P	84.P	Max
Alle	49		34.8	65.6	75.2	90.8	146
2	99	2	34.8		68.6		102
3	350	3	65.6		71.6		144
4	245	19	50.4	67.2	76.4	86.3	90.8
4	246	6	60.1		81.9		114
4	247	14	62.0	63.3	72.1	88.4	146
6	99	3	72.7		75.0		76.2

The deviation of your results from the median of the corresponding sub-collective (kit) is:

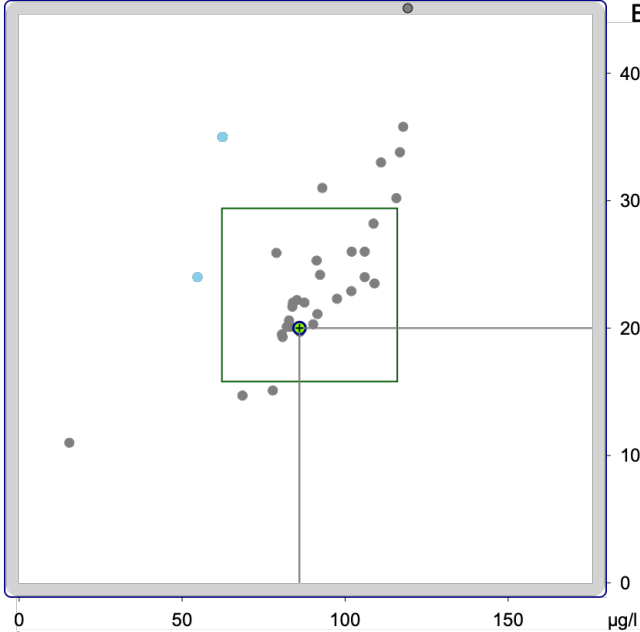
A 36 %  
B 49 %

Other kits (number):  
2-09(1), 4-99(1)

Analyte **IRT**  
 Method all methods

success rate 79,4 %

out of range 1



A

No of participants	<b>34</b>		
sample/unit	A	µg/l	B
mean	88.8		23.7
standard deviation	20.1		5.72
coefficient of variation	22.6		24.2

**Sample A [µg/l]**

M	Kit	N	Min	16.P	50.P	84.P	Max
Alle		34	15.4	78.5	88.9	110	119
2	9	2	54.7		58.6		62.4
4	245	12	78.9	81.0	91.4	106	109
4	246	5	68.5		82.1		90.2
4	247	12	80.6	82.9	102	117	118

**Sample B [µg/l]**

M	Kit	N	Min	16.P	50.P	84.P	Max
Alle		34	11.0	19.6	22.6	31.8	53.8
2	9	2	24.0		29.5		35.0
4	245	12	19.3	20.2	23.2	26.0	28.2
4	246	5	14.7		19.7		20.3
4	247	12	19.5	20.7	24.8	33.7	35.8

Other kits (number):  
 > 2-52(1), < 3-99(1), 3-350(1),