

# LABQUALITY

External Quality Assessment Scheme

## *Neisseria gonorrhoeae* (Gc), culture and susceptibility testing 4, 2017

Please find enclosed the results of the round. In all, 39 laboratories from eleven different countries participated in this EQA round. All laboratories returned their results by the closing date. The specimens were lyophilized strains in culture loops simulating patient urethra/cervix specimens.

The two specimens included the following microbes:

Specimen 001: *Kingella denitrificans*  
*Lactobacillus* sp.

Specimen 002: *Neisseria gonorrhoeae* ATCC® 49226™  
*Pseudomonas aeruginosa*

### Result processing

The final results of the culture are presented in the summary tables. The grey areas show the laboratory's own results. The acceptable results are indicated in the tables by arrows. Please check that the client code on the printouts showing your results is correct. The MIC results of the *Neisseria gonorrhoeae* strains included in the specimens are presented in Annex 1.

### Comments

#### Specimen 001

Specimen 001 contained *Kingella denitrificans* as well as *Lactobacillus* strains and was thus negative in *Neisseria gonorrhoeae* culture. All laboratories except one reported the fully correct result. The success rate was 97.4%.

The selective capacity of the Gc plates that participating laboratories are using varies. Some laboratories reported no growth on plate and some considerable amount of growth. The no growth is probably on selective Gc plate, but the growth might be also on non-selective plate used besides the Gc plate. The identification methods used were able to differentiate *K. denitrificans* from *N. gonorrhoeae*. One laboratory reported specimen 001 as possibly positive and would have sent the strain to a reference laboratory. That laboratory had Vitek 2 for identification purposes. Other Vitek 2 users ended on correct identification.

#### Specimen 002

Specimen 002 contained *Neisseria gonorrhoeae* ATCC 49226 and *Pseudomonas aeruginosa*. The specimen was thus positive in *Neisseria gonorrhoeae* culture. All laboratories except one reported the fully correct result. The success rate was 97.4%.

All identification methods the participants used (based on MALDI-TOF, nucleic acid amplification or biochemical test series) gave the result *N. gonorrhoeae*. Also the laboratory that reported the specimen 002 as negative had identified growth of *N. gonorrhoeae*. The reported negative result was probably just a mistake.

The *N. gonorrhoeae* ATCC 49226 is the susceptibility test control strain that CLSI standard is recommending. The strain is susceptible to ceftriaxone and ciprofloxacin. The susceptibility to azithromycin, penicillin and tetracycline is reduced. The MIC results of the two reference laboratories for the *N. gonorrhoeae* strain ATCC 49226 are presented in Table 1.

2018-01-29

### Final report

Items sent	2017-11-01
Round closed	2017-11-23
Expected results	2017-11-27
Final report	2018-01-29

Product no. 5120  
LQ761117041-042/US UN3373  
Subcontracting: Sample pretesting

### The report includes

- the expected results
- comments on the results by the scheme expert
- laboratory specific result and score tables

### Request for correction

If your printouts are incomplete, or contain incorrect data, you may obtain new corrected printouts by contacting us within four weeks of receiving the results.

The next *N. gonorrhoeae* culture and susceptibility round 1, 2018, will be carried out in March 2018.

### Authorized by

EQA Coordinator  
Elina Tuovinen  
T. +358 50 361 3571  
elina.tuovinen@labquality.fi

### Scheme expert

PhD Anna Muotiala  
United Medix Laboratories Ltd

### Labquality

Kumpulantie 15  
FI-00520 HELSINKI

### Telephone

+358 9 8566 8200

### Fax

+358 9 8566 8280  
+358 9 8566 8281

info@labquality.fi  
www.labquality.fi

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**Table 1.** The MIC results reported by two Finnish reference laboratories of the strain *N. gonorrhoeae* ATCC 49226.

Antimicrobial agent	Ref. Lab 1		Ref. Lab 2	
	MIC (mg/L)	SIR	MIC (mg/L)	SIR
Azithromycin	0.38	I	0.25	S
Ceftriaxone	0.008	S	<0.016	S
Ciprofloxacin	0.002	S	0.003	S
Penicillin G	0.75	I	0.38	I
Tetracycline	2	R	0.5	S
Beta-lactamase test	negative		negative	

The MIC results reported by the participating laboratories are presented in Annex 1. On the whole, most MIC values reported were very nicely in the optimal region. Reported MIC values of 0.3 mg/L and 0.32 mg/L for cefotaxime and 0.032 mg/L for tetracycline are clearly out of range. The interpretation of MIC value of 0.75 mg/L for azithromycin as S as well as MIC value of 0.38 mg/L for penicillin as R are incorrect. Correct interpretations according to EUCAST are R for the first and I for the second. The strain does not produce beta lactamase.

Each participating laboratory can look at their own results on previous rounds 1/2014 and 2/2017 where the same ATCC 49226 strain was also tested. This comparison can give information regarding how well the laboratory manages in the reproducibility.

## Scoring

### General rules

Only culture results are scored. Scoring is implemented for each specimen when 60% or more of the laboratories report a correct/expected result. The scoring range is 0-4 points (p.) and the following general rules are followed:

- 4p. (maximum score) is reached by reporting the expected correct result
- 1-3p. is given to results that are partly correct/insufficient regarding the expected finding
- 0p. is given for an incorrect/false result or not reporting the results before the closing date

### Scoring, round 4, 2017

#### Specimen 001

Negative 4p.  
Possible positive, sent for reference laboratory 0p.

#### Specimen 002

Positive/*N. gonorrhoeae* 4p.  
Negative 0p.

Anna Muotiala, Ph.D., clinical microbiologist, United Medix Laboratories, has commented on the results of this round.

For laboratories ordering paper printouts; the laboratory-specific summary tables and report letter of this scheme are also available on **Labquality homepage** ([www.labquality.fi](http://www.labquality.fi)). Please **login to LabScala** and fill in your laboratory's **client code/personal user name** and **password**. You are able to access your reports via LabScala by selecting "**View reports**" from the front page. Search for the specific scheme by name or press "Choose" to see all.

## Annex 1.

The MIC results reported by the participating laboratories of specimen 002, *N. gonorrhoeae* ATCC 49226.

Antimicrobial agent	MIC value (mg/L)	SIR interpretation	Reported results/followed standard			Results in all
			EUCAST	SFM	BSAC	
Amoxicillin	0.25	I		1		1
Azithromycin	0.125	S	1	1		
	0.19	S	1			
	0.25	S	9	1		
	0.38	I	1			
	0.5	I	1			
	0.75	S	1			
	0.75	R	1			17
Cefixime	≤0.016	S	8			8
Cefotaxime	0.012	S	1			
	0.016	S	5			
	0.023	S	2	1		
	0.3	S		1		
	0.32	S	1			11
Ceftriaxone	<0.002	S	1			
	0.003	S	1			
	0.004	S	3	1		
	0.006	S	5			
	0.008	S	3		1	
	0.012	S	3			
	≤0.016	S	9			
	0.023	S	2			29
Ciprofloxacin	≤0.002	S	14	2		
	0.003	S	7			
	0.004	S	4			
	0.006	S	1			
	0.016	S	1			29
Ofloxacin	0.003	S	1			1
Penicillin	0.19	I	1			
	0.25	I	5			
	0.38	I	7			
	0.38	R	1			
	0.5	I	2	1		
	0.75	I	2			
	1	I	1		1	21
Spectinomycin	6	S		1		
	8	S	1			
	12	S	3			5
Tetracycline	0.032	S	1			
	0.25	S	1			
	0.5	S	1			
	0.38	S	1			
	0.75	I	3	1		
	1	I	1			9

## End of report

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