



## **TEST FORMS – Selective isolation of presumptive ESBL-, AmpC- and carbapenemase-producing *Escherichia coli* from mixed cultures mimicking meat samples (Matrix EQAS)**

These test forms are an overview of the data needed for submission of the EQAsia EQA2 – Matrix EQAS results into the webtool.



# Methods

1- Method used for selective isolation of ESBL/AmpC in this EQAS:

Selective isolation procedure using the EURL recommended procedure that refer to the EU regulation 652/2013/EU – briefly described in the EQAsia protocol

- The protocol was used without modifications (please jump to question 2)
- The protocol was used, however, the selective isolation procedures were modified (please respond question 1.1)
- The protocol was used, however, the incubation conditions in the selective plating were modified (please respond question 1.2)

1.1- If you made changes in the selective isolation procedure:

Different concentration of cefotaxime: \_\_\_\_\_ mg/L

Different antimicrobial: \_\_\_\_\_

Different medium: \_\_\_\_\_

Please justify these changes: \_\_\_\_\_

1.2- If you used different incubation conditions in the selective plating, please indicate the conditions used: \_\_\_\_\_°C/ \_\_\_\_\_h;

Please justify these changes: \_\_\_\_\_

2- Method used for selective isolation of carbapenemase-producers (in case you run this method) in this EQAS:

- We did not perform carbapenemase selective isolation
- We performed carbapenemase selective isolation

Plates used (brand/type): \_\_\_\_\_

Comments: \_\_\_\_\_



3- Method used for confirmation of *E. coli* species identification. Please indicate the primary *E. coli* identification method used (choose only one option; if you used more than one method, please explain in the comments field)

- PCR using published methods
- PCR using in-house method
- Biochemical tests
- MALDI-ToF
- DNA Sequencing
- Chromogenic media

Comments or additional information:

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4- Method used for general antimicrobial susceptibility testing of the strains (choose only one option)

- MIC – Microbroth dilution
- MIC – Macro dilution (tubes)
- MIC – Agar dilution
- Gradient test
- Disk diffusion
- Tablets – Neo Sensitabs, Rosco

5- Additional comments: \_\_\_\_\_



## Test form – Sample ‘EQAsia 21.M1’

**Please describe the results you have observed regarding this sample.**

Growth on ESBL/AmpC-selective plates:

Yes  / No

**Please describe the growth observed on ESBL/AmpC-selective plates?** (Choose only one option)

- Mixed culture containing typical *E. coli* colonies
- Mixed culture without typical *E. coli* colonies
- Pure culture of typical *E. coli* colonies
- Pure culture without typical *E. coli* colonies
- No growth

**Results of species identification:** (choose only one option)

- No isolates tested (sample negative)
- Presumptive ESBL/AmpC isolate identified as *E. coli* (sample considered positive)

Comments: \_\_\_\_\_

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**Did you perform carbapenemase selective plating?**

Yes  / No

Growth on CARBA-selective plates:

Yes  / No  / Not applicable

Growth on OXA-48 selective plates:

Yes  / No  / Not applicable



**Results of species identification (isolates from carbapenemase selective plating):** (choose only one option)

- No isolates tested (sample negative)
- Presumptive other carbapenemase isolate identified as *E. coli* (sample considered positive)
- Presumptive OXA-48 isolate identified as *E. coli* (sample considered positive)

Comments: \_\_\_\_\_

**Please confirm where the isolate tested for antimicrobial susceptibility originated from (compulsory):**

- ESBL/ampC isolation on MacConkey with cefotaxime
- CARBA plate
- OXA-48 plate
- Other: \_\_\_\_\_

**Based on the AST results, was the isolate found resistant to cefotaxime and/or ceftazidime?**

Yes  / No



## AST results

Sample	Antimicrobial	Interpretation		
		≤ >	MIC-value (mg/L) or Zone diameter (mm)	S/R
<b>EQAsia 21.M1</b>  <input type="checkbox"/> <i>E. coli</i>  <input type="checkbox"/> Non- <i>E.coli</i>  <input type="checkbox"/> Not tested	Ampicillin, AMP			
	Azithromycin, AZI			
	Cefepime, FEP			
	Cefotaxime, FOT			
	Cefotaxime, FOT + clavulanic acid			
	Cefoxitin, FOX			
	Ceftazidime, TAZ			
	Ceftazidime, TAZ + clavulanic acid			
	Chloramphenicol, CHL			
	Ciprofloxacin, CIP			
	Colistin, COL			
	Ertapenem, ETP			
	Gentamicin, GEN			
	Imipenem, IMI			
	Meropenem, MERO			
	Nalidixic acid, NAL			
	Sulfamethoxazole, SMX			
	Tetracycline, TET			
	Tigecycline, TIG			
	Trimethoprim, TMP			

Please select the detected ESBL-phenotype (see guideline in the EQAS protocol): [please select one option]

- ESBL-phenotype
- ESBL+AmpC-phenotype
- AmpC-phenotype
- Carbapenemase-phenotype
- Other phenotype

Comments (include optional genotype or other results): \_\_\_\_\_



## Test form – Sample ‘EQAsia 21.M2’

**Please describe the results you have observed regarding this sample.**

Growth on ESBL/AmpC-selective plates:

Yes  / No

**Please describe the growth observed on ESBL/AmpC-selective plates?** (Choose only one option)

- Mixed culture containing typical *E. coli* colonies
- Mixed culture without typical *E. coli* colonies
- Pure culture of typical *E. coli* colonies
- Pure culture without typical *E. coli* colonies
- No growth

**Results of species identification:** (choose only one option)

- No isolates tested (sample negative)
- Presumptive ESBL/AmpC isolate identified as *E. coli* (sample considered positive)

Comments: \_\_\_\_\_

**Did you perform carbapenemase selective plating?**

Yes  / No

Growth on CARBA-selective plates:

Yes  / No  / Not applicable

Growth on OXA-48 selective plates:

Yes  / No  / Not applicable



**Results of species identification (isolates from carbapenemase selective plating):** (choose only one option)

- No isolates tested (sample negative)
- Presumptive other carbapenemase isolate identified as *E. coli* (sample considered positive)
- Presumptive OXA-48 isolate identified as *E. coli* (sample considered positive)

Comments: \_\_\_\_\_

**Please confirm where the isolate tested for antimicrobial susceptibility originated from (compulsory):**

- ESBL/ampC isolation on MacConkey with cefotaxime
- CARBA plate
- OXA-48 plate
- Other: \_\_\_\_\_

**Based on the AST results, was the isolate found resistant to cefotaxime and/or ceftazidime?**

Yes  / No





## AST results

Sample	Antimicrobial	Interpretation		
		≤ >	MIC-value (mg/L) or Zone diameter (mm)	S/R
<b>EQAsia 21.M2</b>  <input type="checkbox"/> <i>E. coli</i>  <input type="checkbox"/> Non- <i>E.coli</i>  <input type="checkbox"/> Not tested	Ampicillin, AMP			
	Azithromycin, AZI			
	Cefepime, FEP			
	Cefotaxime, FOT			
	Cefotaxime, FOT + clavulanic acid			
	Cefoxitin, FOX			
	Ceftazidime, TAZ			
	Ceftazidime, TAZ + clavulanic acid			
	Chloramphenicol, CHL			
	Ciprofloxacin, CIP			
	Colistin, COL			
	Ertapenem, ETP			
	Gentamicin, GEN			
	Imipenem, IMI			
	Meropenem, MERO			
	Nalidixic acid, NAL			
	Sulfamethoxazole, SMX			
	Tetracycline, TET			
	Tigecycline, TIG			
	Trimethoprim, TMP			

Please select the detected ESBL-phenotype (see guideline in the EQAS protocol): [please select one option]

- ESBL-phenotype
- ESBL+AmpC-phenotype
- AmpC-phenotype
- Carbapenemase-phenotype
- Other phenotype

Comments (include optional genotype or other results): \_\_\_\_\_



## Test form – Sample ‘EQAsia 21.M3’

**Please describe the results you have observed regarding this sample.**

Growth on ESBL/AmpC-selective plates:

Yes  / No

**Please describe the growth observed on ESBL/AmpC-selective plates?** (Choose only one option)

- Mixed culture containing typical *E. coli* colonies
- Mixed culture without typical *E. coli* colonies
- Pure culture of typical *E. coli* colonies
- Pure culture without typical *E. coli* colonies
- No growth

**Results of species identification:** (choose only one option)

- No isolates tested (sample negative)
- Presumptive ESBL/AmpC isolate identified as *E. coli* (sample considered positive)

Comments: \_\_\_\_\_

**Did you perform carbapenemase selective plating?**

Yes  / No

Growth on CARBA-selective plates:

Yes  / No  / Not applicable

Growth on OXA-48 selective plates:

Yes  / No  / Not applicable



**Results of species identification (isolates from carbapenemase selective plating):** (choose only one option)

- No isolates tested (sample negative)
- Presumptive other carbapenemase isolate identified as *E. coli* (sample considered positive)
- Presumptive OXA-48 isolate identified as *E. coli* (sample considered positive)

Comments: \_\_\_\_\_

**Please confirm where the isolate tested for antimicrobial susceptibility originated from (compulsory):**

- ESBL/ampC isolation on MacConkey with cefotaxime
- CARBA plate
- OXA-48 plate
- Other: \_\_\_\_\_

**Based on the AST results, was the isolate found resistant to cefotaxime and/or ceftazidime?**

Yes  / No



## AST results

Sample	Antimicrobial	Interpretation		
		≤ >	MIC-value (mg/L) or Zone diameter (mm)	S/R
<b>EQAsia 21.M3</b>  <input type="checkbox"/> <i>E. coli</i>  <input type="checkbox"/> Non- <i>E.coli</i>  <input type="checkbox"/> Not tested	Ampicillin, AMP			
	Azithromycin, AZI			
	Cefepime, FEP			
	Cefotaxime, FOT			
	Cefotaxime, FOT + clavulanic acid			
	Cefoxitin, FOX			
	Ceftazidime, TAZ			
	Ceftazidime, TAZ + clavulanic acid			
	Chloramphenicol, CHL			
	Ciprofloxacin, CIP			
	Colistin, COL			
	Ertapenem, ETP			
	Gentamicin, GEN			
	Imipenem, IMI			
	Meropenem, MERO			
	Nalidixic acid, NAL			
	Sulfamethoxazole, SMX			
	Tetracycline, TET			
	Tigecycline, TIG			
	Trimethoprim, TMP			

Please select the detected ESBL-phenotype (see guideline in the EQAS protocol): [please select one option]

- ESBL-phenotype
- ESBL+AmpC-phenotype
- AmpC-phenotype
- Carbapenemase-phenotype
- Other phenotype

Comments (include optional genotype or other results): \_\_\_\_\_



## Test form – Sample ‘EQAsia 21.M4’

**Please describe the results you have observed regarding this sample.**

Growth on ESBL/AmpC-selective plates:

Yes  / No

**Please describe the growth observed on ESBL/AmpC-selective plates?** (Choose only one option)

- Mixed culture containing typical *E. coli* colonies
- Mixed culture without typical *E. coli* colonies
- Pure culture of typical *E. coli* colonies
- Pure culture without typical *E. coli* colonies
- No growth

**Results of species identification:** (choose only one option)

- No isolates tested (sample negative)
- Presumptive ESBL/AmpC isolate identified as *E. coli* (sample considered positive)

Comments: \_\_\_\_\_

**Did you perform carbapenemase selective plating?**

Yes  / No

Growth on CARBA-selective plates:

Yes  / No  / Not applicable

Growth on OXA-48 selective plates:

Yes  / No  / Not applicable



**Results of species identification (isolates from carbapenemase selective plating):** (choose only one option)

- No isolates tested (sample negative)
- Presumptive other carbapenemase isolate identified as *E. coli* (sample considered positive)
- Presumptive OXA-48 isolate identified as *E. coli* (sample considered positive)

Comments: \_\_\_\_\_

**Please confirm where the isolate tested for antimicrobial susceptibility originated from (compulsory):**

- ESBL/ampC isolation on MacConkey with cefotaxime
- CARBA plate
- OXA-48 plate
- Other: \_\_\_\_\_

**Based on the AST results, was the isolate found resistant to cefotaxime and/or ceftazidime?**

Yes  / No



## AST results

Sample	Antimicrobial	Interpretation		
		≤ >	MIC-value (mg/L) or Zone diameter (mm)	S/R
<b>EQAsia 21.M4</b>  <input type="checkbox"/> <i>E. coli</i>  <input type="checkbox"/> Non- <i>E.coli</i>  <input type="checkbox"/> Not tested	Ampicillin, AMP			
	Azithromycin, AZI			
	Cefepime, FEP			
	Cefotaxime, FOT			
	Cefotaxime, FOT + clavulanic acid			
	Cefoxitin, FOX			
	Ceftazidime, TAZ			
	Ceftazidime, TAZ + clavulanic acid			
	Chloramphenicol, CHL			
	Ciprofloxacin, CIP			
	Colistin, COL			
	Ertapenem, ETP			
	Gentamicin, GEN			
	Imipenem, IMI			
	Meropenem, MERO			
	Nalidixic acid, NAL			
	Sulfamethoxazole, SMX			
	Tetracycline, TET			
	Tigecycline, TIG			
	Trimethoprim, TMP			

Please select the detected ESBL-phenotype (see guideline in the EQAS protocol): [please select one option]

- ESBL-phenotype
- ESBL+AmpC-phenotype
- AmpC-phenotype
- Carbapenemase-phenotype
- Other phenotype

Comments (include optional genotype or other results): \_\_\_\_\_



## Test form – Sample ‘EQAsia 21.M5’

**Please describe the results you have observed regarding this sample.**

Growth on ESBL/AmpC-selective plates:

Yes  / No

**Please describe the growth observed on ESBL/AmpC-selective plates?** (Choose only one option)

- Mixed culture containing typical *E. coli* colonies
- Mixed culture without typical *E. coli* colonies
- Pure culture of typical *E. coli* colonies
- Pure culture without typical *E. coli* colonies
- No growth

**Results of species identification:** (choose only one option)

- No isolates tested (sample negative)
- Presumptive ESBL/AmpC isolate identified as *E. coli* (sample considered positive)

Comments: \_\_\_\_\_

**Did you perform carbapenemase selective plating?**

Yes  / No

Growth on CARBA-selective plates:

Yes  / No  / Not applicable

Growth on OXA-48 selective plates:

Yes  / No  / Not applicable





**Results of species identification (isolates from carbapenemase selective plating):** (choose only one option)

- No isolates tested (sample negative)
- Presumptive other carbapenemase isolate identified as *E. coli* (sample considered positive)
- Presumptive OXA-48 isolate identified as *E. coli* (sample considered positive)

Comments: \_\_\_\_\_

**Please confirm where the isolate tested for antimicrobial susceptibility originated from (compulsory):**

- ESBL/ampC isolation on MacConkey with cefotaxime
- CARBA plate
- OXA-48 plate
- Other: \_\_\_\_\_

**Based on the AST results, was the isolate found resistant to cefotaxime and/or ceftazidime?**

Yes  / No



## AST results

Sample	Antimicrobial	Interpretation		
		≤ >	MIC-value (mg/L) or Zone diameter (mm)	S/R
<b>EQAsia 21.M5</b>  <input type="checkbox"/> <i>E. coli</i>  <input type="checkbox"/> Non- <i>E.coli</i>  <input type="checkbox"/> Not tested	Ampicillin, AMP			
	Azithromycin, AZI			
	Cefepime, FEP			
	Cefotaxime, FOT			
	Cefotaxime, FOT + clavulanic acid			
	Cefoxitin, FOX			
	Ceftazidime, TAZ			
	Ceftazidime, TAZ + clavulanic acid			
	Chloramphenicol, CHL			
	Ciprofloxacin, CIP			
	Colistin, COL			
	Ertapenem, ETP			
	Gentamicin, GEN			
	Imipenem, IMI			
	Meropenem, MERO			
	Nalidixic acid, NAL			
	Sulfamethoxazole, SMX			
	Tetracycline, TET			
	Tigecycline, TIG			
	Trimethoprim, TMP			

Please select the detected ESBL-phenotype (see guideline in the EQAS protocol): [please select one option]

- ESBL-phenotype
- ESBL+AmpC-phenotype
- AmpC-phenotype
- Carbapenemase-phenotype
- Other phenotype

Comments (include optional genotype or other results): \_\_\_\_\_



## Test form – Reference strain: *Escherichia coli* ATCC 25922/CCM 3954

Strain – <i>Escherichia coli</i> ATCC 25922/ CCM 3954	Antimicrobial	MIC value (mg/L) or Zone Diameter (mm)
	Ampicillin, AMP	
	Azithromycin, AZI	
	Cefepime, FEP	
	Cefotaxime, FOT	
	Cefotaxime, FOT + clavulanic acid	
	Cefoxitin, FOX	
	Ceftazidime, TAZ	
	Ceftazidime, TAZ + clavulanic acid	
	Chloramphenicol, CHL	
	Ciprofloxacin, CIP	
	Ertapenem, ETP	
	Gentamicin, GEN	
	Imipenem, IMI	
	Meropenem, MERO	
	Nalidixic acid, NAL	
	Sulfamethoxazole, SMX	
	Tetracycline, TET	
	Tigecycline, TGC	
Trimethoprim, TMP		

## Test form – Reference strain: *Escherichia coli* NCTC 13846/CCM 8874 (for colistin)

Strain – <i>Escherichia coli</i> NCTC 13846/ CCM 8874	Antimicrobial	MIC value (mg/L) or Zone Diameter (mm)
	Colistin, COL	