

EuSCAPE EQA 2013

EUCAST tööühma koosolek

19.11.2013

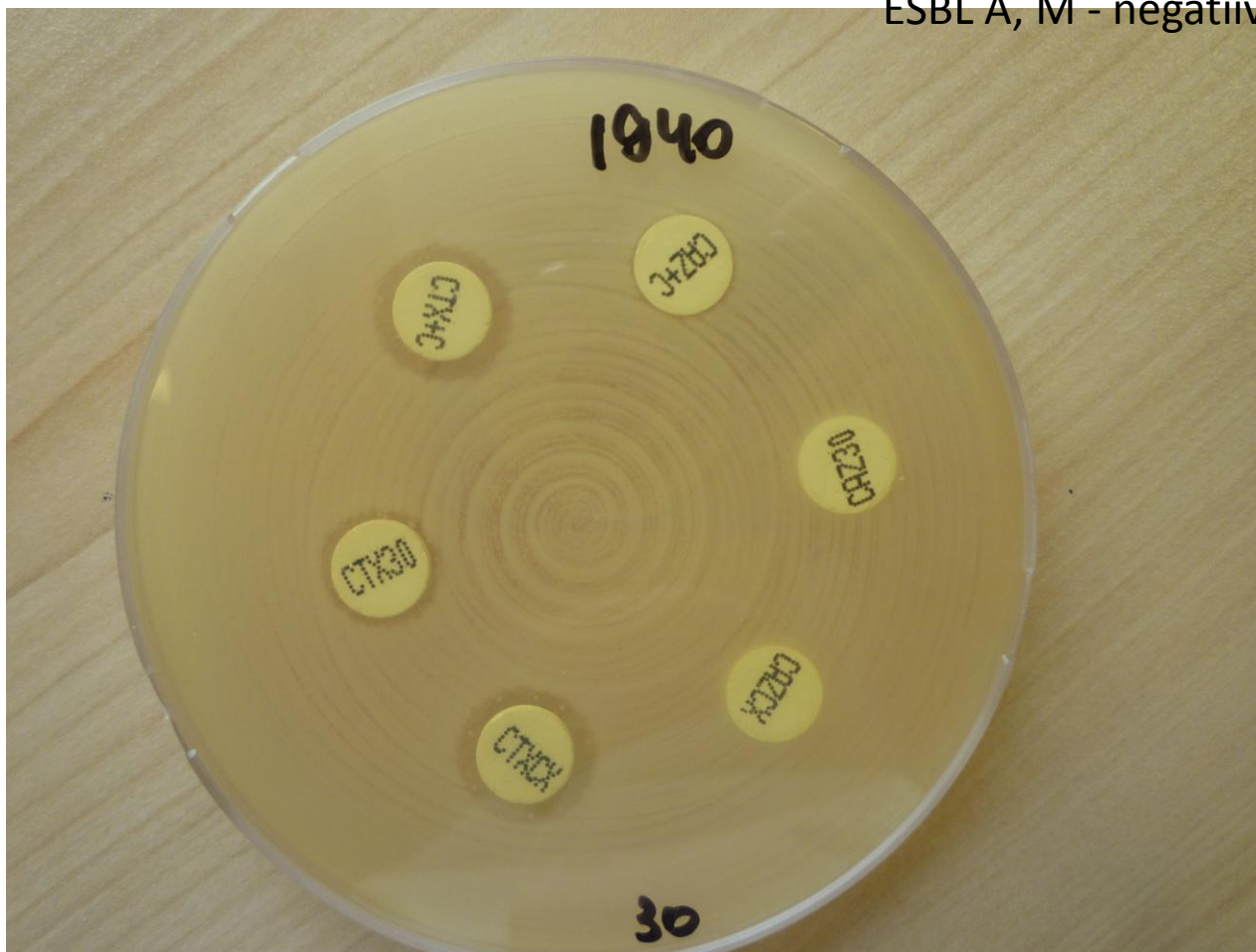
ITK

Agent	Specimen Number				
	1940	1941	1942	1943	1944
	<i>Klebsiella pneumoniae</i>	<i>Enterobacter cloacae</i>	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>
Amikacin	S	R	I/R	S	I/R
Amoxicillin	R	R	R	R	R
Amoxicillin/Clavulanate	R	R	R	R	R
Aztreonam	R*	R	R*	S	R*
Cefepime	R	R	R	S	R
Cefotaxime	R	R	R	I	R
Ceftazidime	R	R	R	S	R
Ciprofloxacin	R	R	R	S	R
Colistin	S	S	S*	S	S
Ertapenem	R	R	R	R	R
Fosfomycin	S*	S*	S*	Not assigned	S*
Gentamicin	R	R	S	S	S
Imipenem	R	R	R	I	R*
Meropenem	R	R	R	I	I
Piperacillin-Tazobactam	R	R	R	R	R
Tigecycline	Not assigned	R	R	S	Not assigned
Tobramycin	R	R	R	S	R
Trimethoprim/Sulfamethoxazole	R*	R*	R*	R*	S*
Carbapenemase gene	KPC	NDM	KPC	OXA-48-group	KPC

Key: Not assigned = no reference result and no consensus
 * = consensus result
 S = susceptible I = intermediate R = resistant

1 tüvi - *Klebsiella pneumoniae*

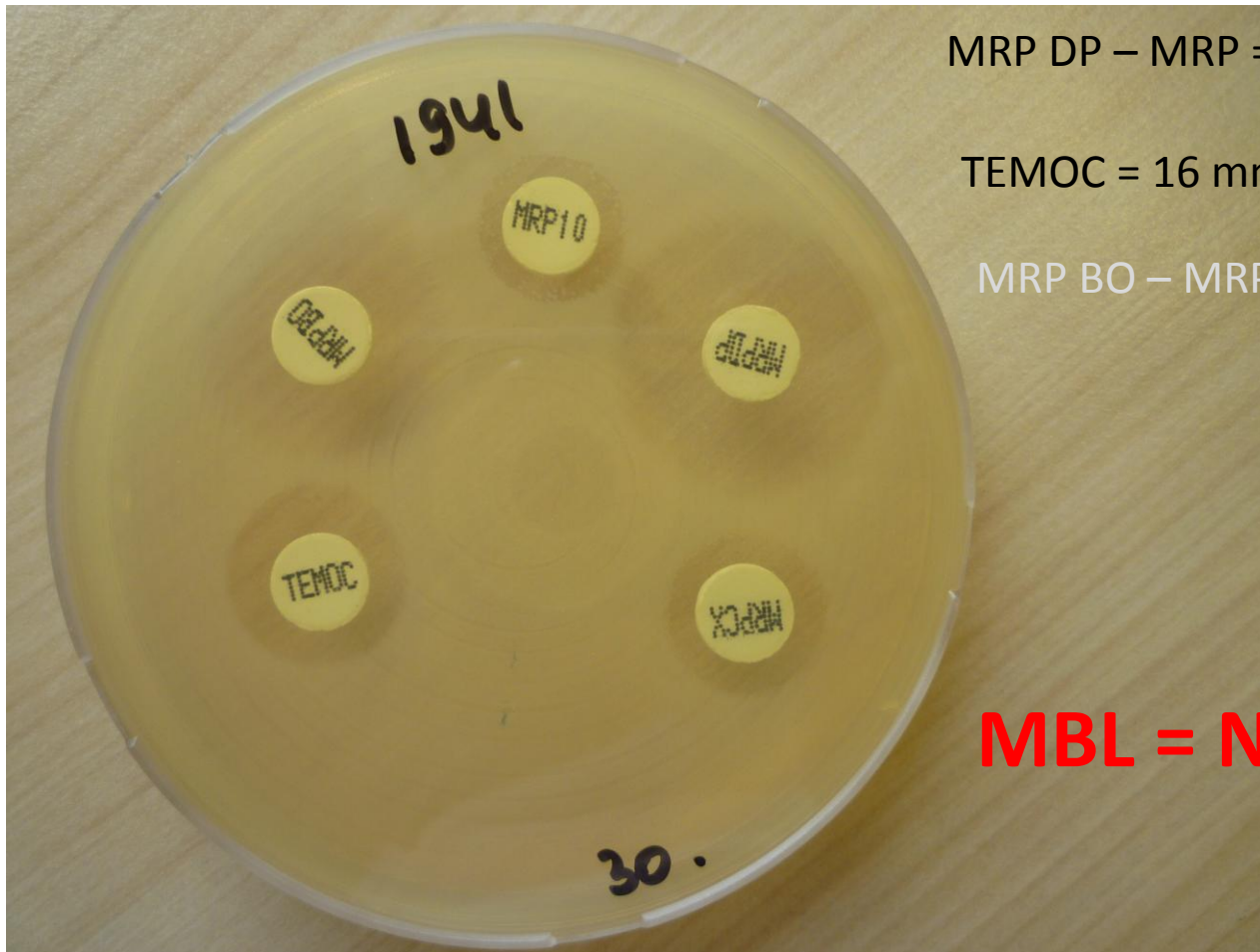
ESBL A, M - negatiivne



Agent	Specimen Number				
	1940	1941	1942	1943	1944
	<i>Klebsiella pneumoniae</i>	<i>Enterobacter cloacae</i>	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>
Amikacin	S	R	I/R	S	I/R
Amoxicillin	R	R	R	R	R
Amoxicillin/Clavulanate	R	R	R	R	R
Aztreonam	R*	R	R*	S	R*
Cefepime	R	R	R	S	R
Cefotaxime	R	R	R	I	R
Ceftazidime	R	R	R	S	R
Ciprofloxacin	R	R	R	S	R
Colistin	S	S	S*	S	S
Ertapenem	R	R	R	R	R
Fosfomycin	S*	S*	S*	Not assigned	S*
Gentamicin	R	R	S	S	S
Imipenem	R	R	R	I	R*
Meropenem	R	R	R	I	I
Piperacillin-Tazobactam	R	R	R	R	R
Tigecycline	Not assigned	R	R	S	Not assigned
Tobramycin	R	R	R	S	R
Trimethoprim/Sulfamethoxazole	R*	R*	R*	R*	S*
Carbapenemase gene	KPC	NDM	KPC	OXA-48-group	KPC

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 * = consensus result
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2 tüvi – *Enterobacter cloacae*



MRP DP – MRP = 15 mm

TEMOC = 16 mm

MRP BO – MRP = 6 mm

MBL = NDM

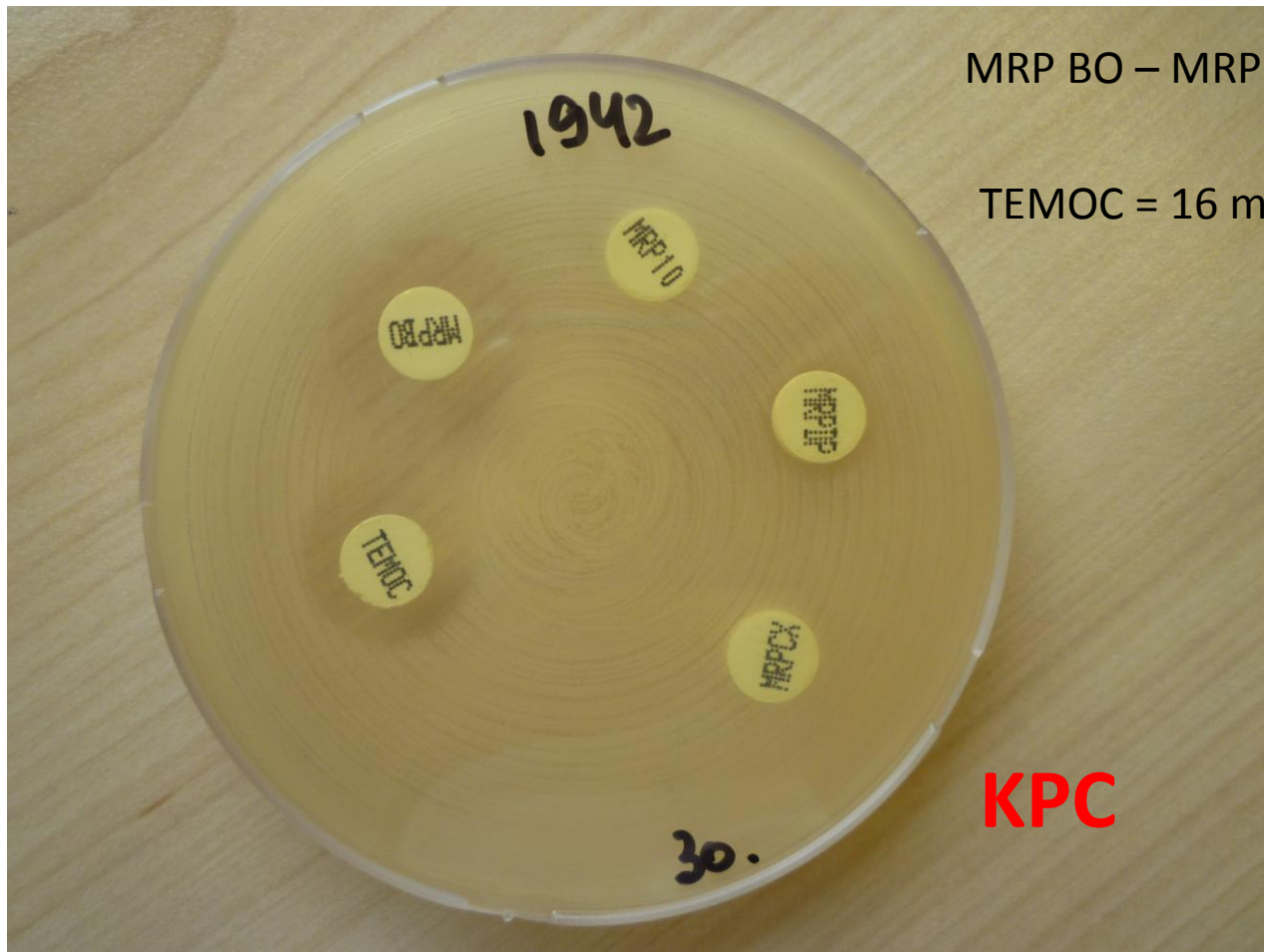
2 tüvi – *Enterobacter cloacae*



Agent	Specimen Number				
	1940	1941	1942	1943	1944
	<i>Klebsiella pneumoniae</i>	<i>Enterobacter cloacae</i>	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>
Amikacin	S	R	I/R	S	I/R
Amoxicillin	R	R	R	R	R
Amoxicillin/Clavulanate	R	R	R	R	R
Aztreonam	R*	R	R*	S	R*
Cefepime	R	R	R	S	R
Cefotaxime	R	R	R	I	R
Ceftazidime	R	R	R	S	R
Ciprofloxacin	R	R	R	S	R
Colistin	S	S	S*	S	S
Ertapenem	R	R	R	R	R
Fosfomycin	S*	S*	S*	Not assigned	S*
Gentamicin	R	R	S	S	S
Imipenem	R	R	R	I	R*
Meropenem	R	R	R	I	I
Piperacillin-Tazobactam	R	R	R	R	R
Tigecycline	Not assigned	R	R	S	Not assigned
Tobramycin	R	R	R	S	R
Trimethoprim/Sulfamethoxazole	R*	R*	R*	R*	S*
Carbapenemase gene	KPC	NDM	KPC	OXA-48-group	KPC

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3 tüvi – *Klebsiella pneumoniae*



MRP BO – MRP = 10 mm

TEMOC = 16 mm

KPC

Agent	Specimen Number				
	1940	1941	1942	1943	1944
	<i>Klebsiella pneumoniae</i>	<i>Enterobacter cloacae</i>	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>
Amikacin	S	R	I/R	S	I/R
Amoxicillin	R	R	R	R	R
Amoxicillin/Clavulanate	R	R	R	R	R
Aztreonam	R*	R	R*	S	R*
Cefepime	R	R	R	S	R
Cefotaxime	R	R	R	I	R
Ceftazidime	R	R	R	S	R
Ciprofloxacin	R	R	R	S	R
Colistin	S	S	S*	S	S
Ertapenem	R	R	R	R	R
Fosfomycin	S*	S*	S*	Not assigned	S*
Gentamicin	R	R	S	S	S
Imipenem	R	R	R	I	R*
Meropenem	R	R	R	I	I
Piperacillin-Tazobactam	R	R	R	R	R
Tigecycline	Not assigned	R	R	S	Not assigned
Tobramycin	R	R	R	S	R
Trimethoprim/Sulfamethoxazole	R*	R*	R*	R*	S*
Carbapenemase gene	KPC	NDM	KPC	OXA-48-group	KPC

Key: Not assigned = no reference result and no consensus

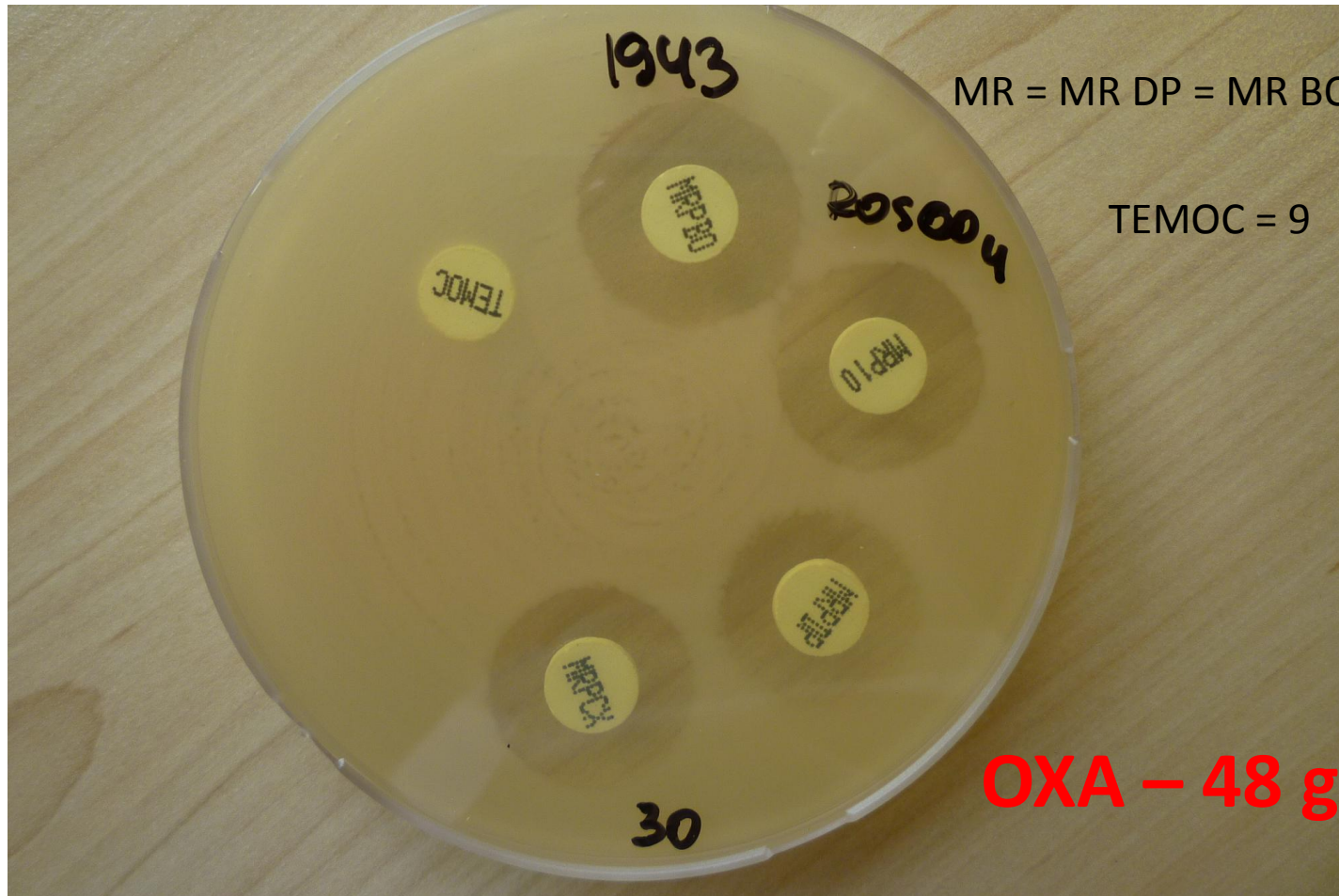
* = consensus result

S = susceptible

I = intermediate

R = resistant

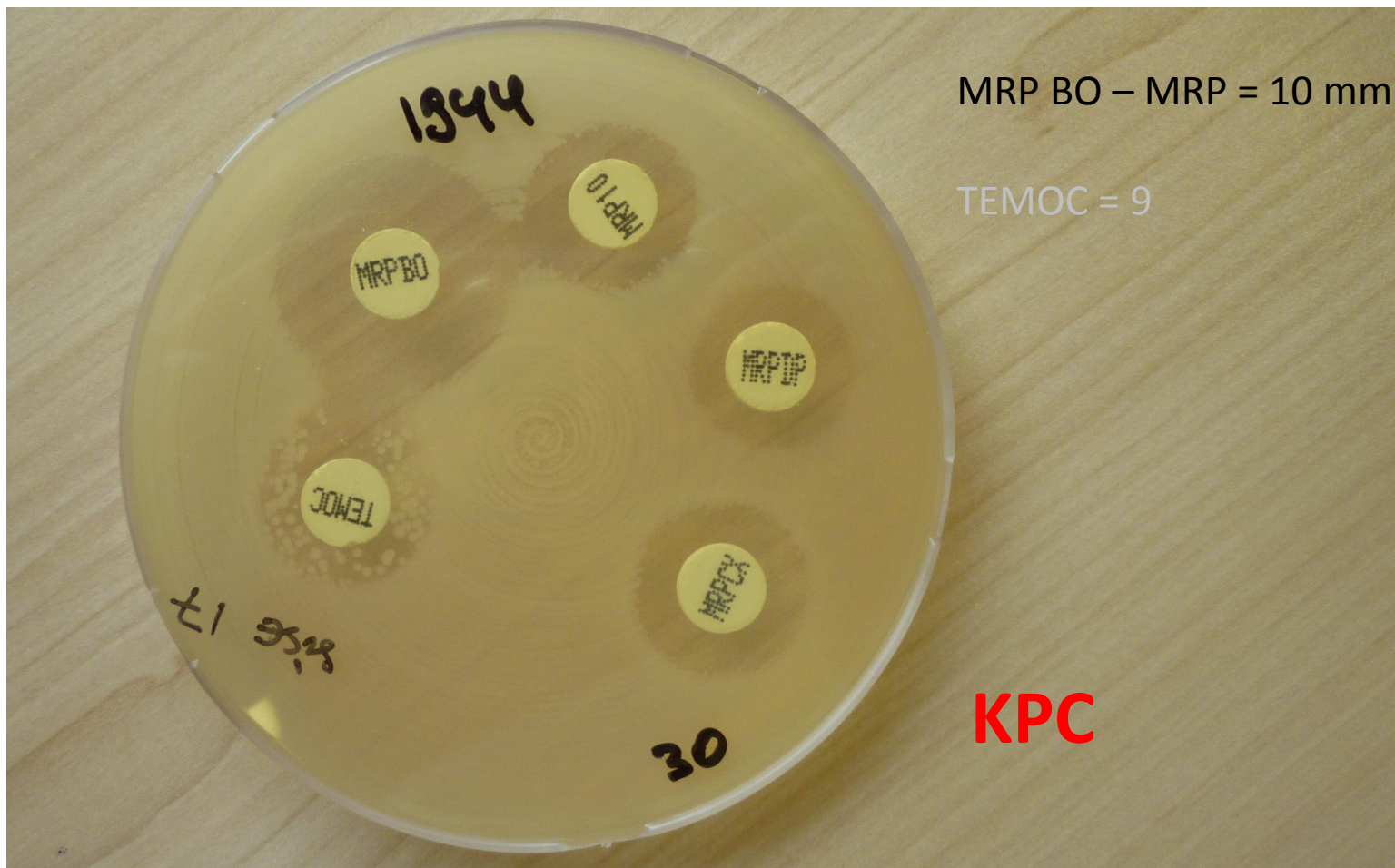
4 tüvi – *Klebsiella pneumoniae*



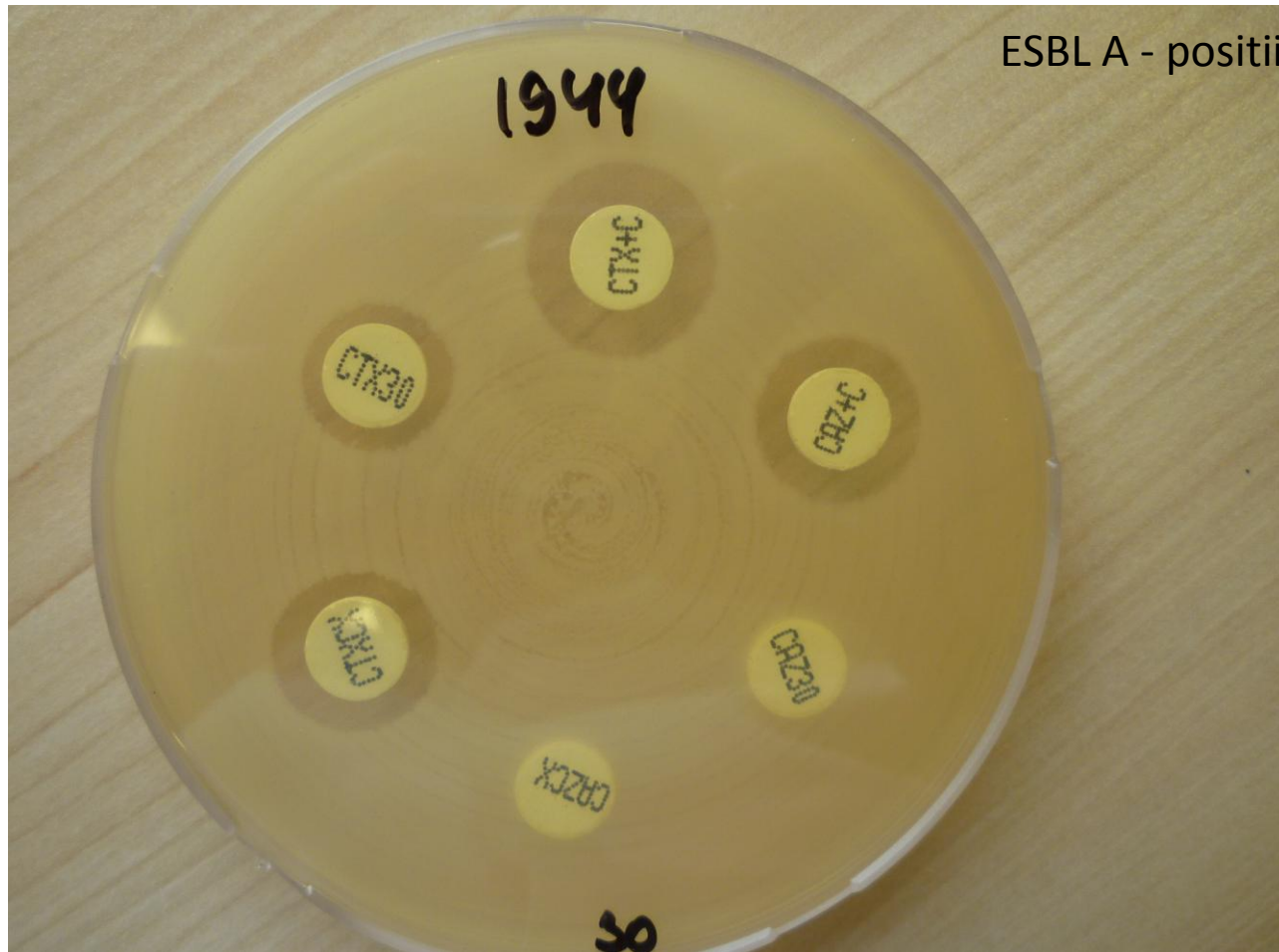
Agent	Specimen Number				
	1940	1941	1942	1943	1944
	<i>Klebsiella pneumoniae</i>	<i>Enterobacter cloacae</i>	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>
Amikacin	S	R	I/R	S	I/R
Amoxicillin	R	R	R	R	R
Amoxicillin/Clavulanate	R	R	R	R	R
Aztreonam	R*	R	R*	S	R*
Cefepime	R	R	R	S	R
Cefotaxime	R	R	R	I	R
Ceftazidime	R	R	R	S	R
Ciprofloxacin	R	R	R	S	R
Colistin	S	S	S*	S	S
Ertapenem	R	R	R	R	R
Fosfomycin	S*	S*	S*	Not assigned	S*
Gentamicin	R	R	S	S	S
Imipenem	R	R	R	I	R*
Meropenem	R	R	R	I	I
Piperacillin-Tazobactam	R	R	R	R	R
Tigecycline	Not assigned	R	R	S	Not assigned
Tobramycin	R	R	R	S	R
Trimethoprim/Sulfamethoxazole	R*	R*	R*	R*	S*
Carbapenemase gene	KPC	NDM	KPC	OXA-48-group	KPC

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5 tüvi – *Klebsiella pneumoniae*



5 tüvi – *Klebsiella pneumoniae*



NEQAS for Microbiology

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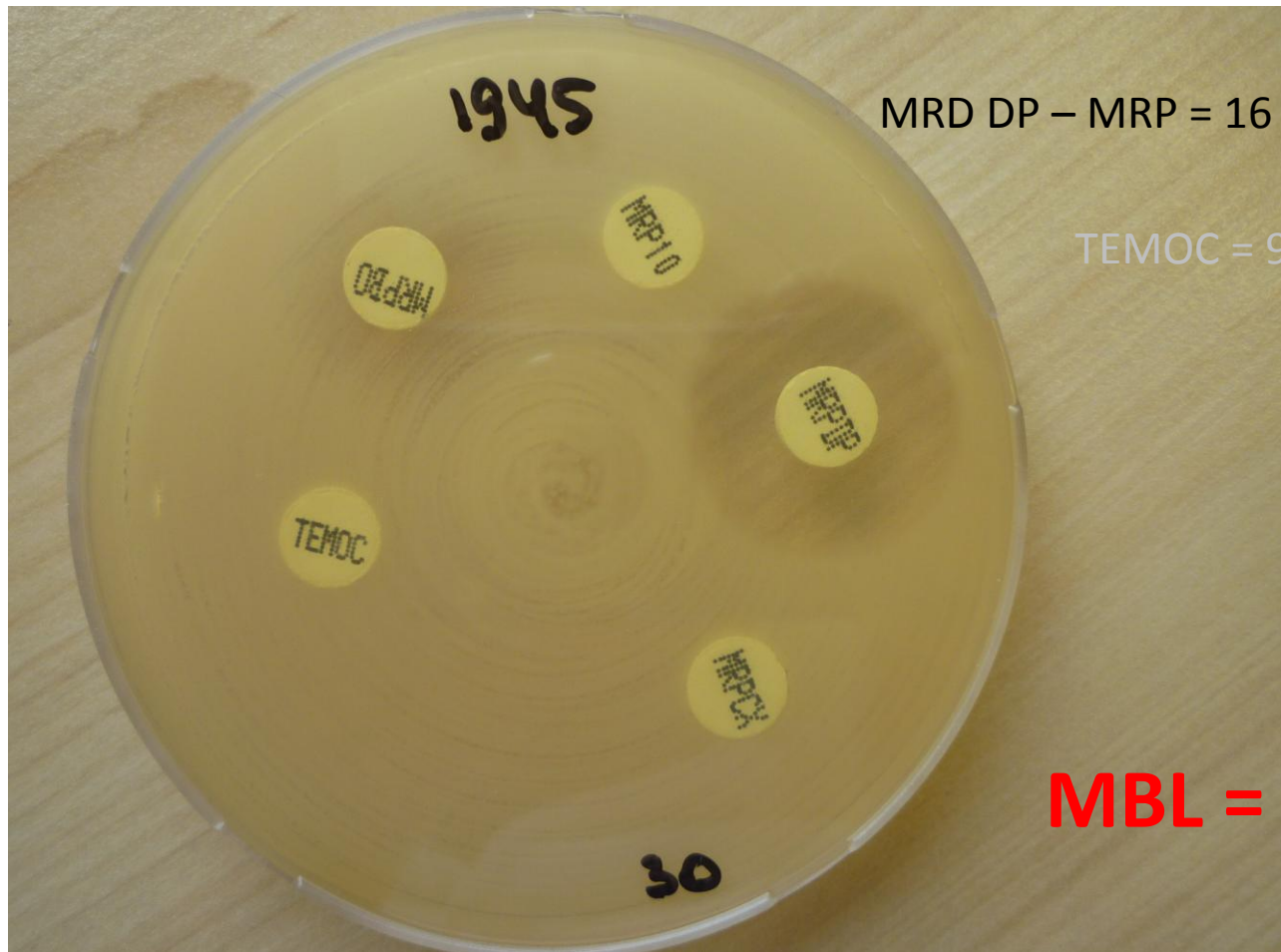
UK NEQAS for Microbiology PO Box 63003, NW9 1GH

Tel: + 44 (0)20 8905 9890 Fax: + 44 (0)20 8205 1455 E-mail: organiser@ukneqasmicro.org.uk web: <http://www.ukneqasmicro.org.uk>

Agent	Specimen Number				
	1945	1946	1947	1948	1949
	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>	<i>Enterobacter aerogenes</i>
Amikacin	I*	R	R	R*	S
Amoxicillin	R	R	R	R	R
Amoxicillin/Clavulanate	R	R	R	R	R
Aztreonam	S	R	S*	R	R*
Cefepime	R	R	R	R	S
Cefotaxime	R	R	R	R	R
Ceftazidime	R	R	R	R	R
Ciprofloxacin	R	R	R	R	S
Colistin	S	S	S	S	S
Ertapenem	R	R	R	R	R
Fosfomycin	S*	Not assigned	S*	R*	S*
Gentamicin	S	R	R	R	S
Imipenem	R	R	I/R	R*	I
Meropenem	R	R	R	R*	I
Piperacillin-Tazobactam	R	R	R	R	R
Tigecycline	Not assigned	Not assigned	R	Not assigned	Not assigned
Tobramycin	R	R	R	R	S
Trimethoprim/Sulfamethoxazole	R*	R*	Not assigned	R*	S*
Carbapenemase gene	VIM	NDM	IMP	NDM	Not applicable

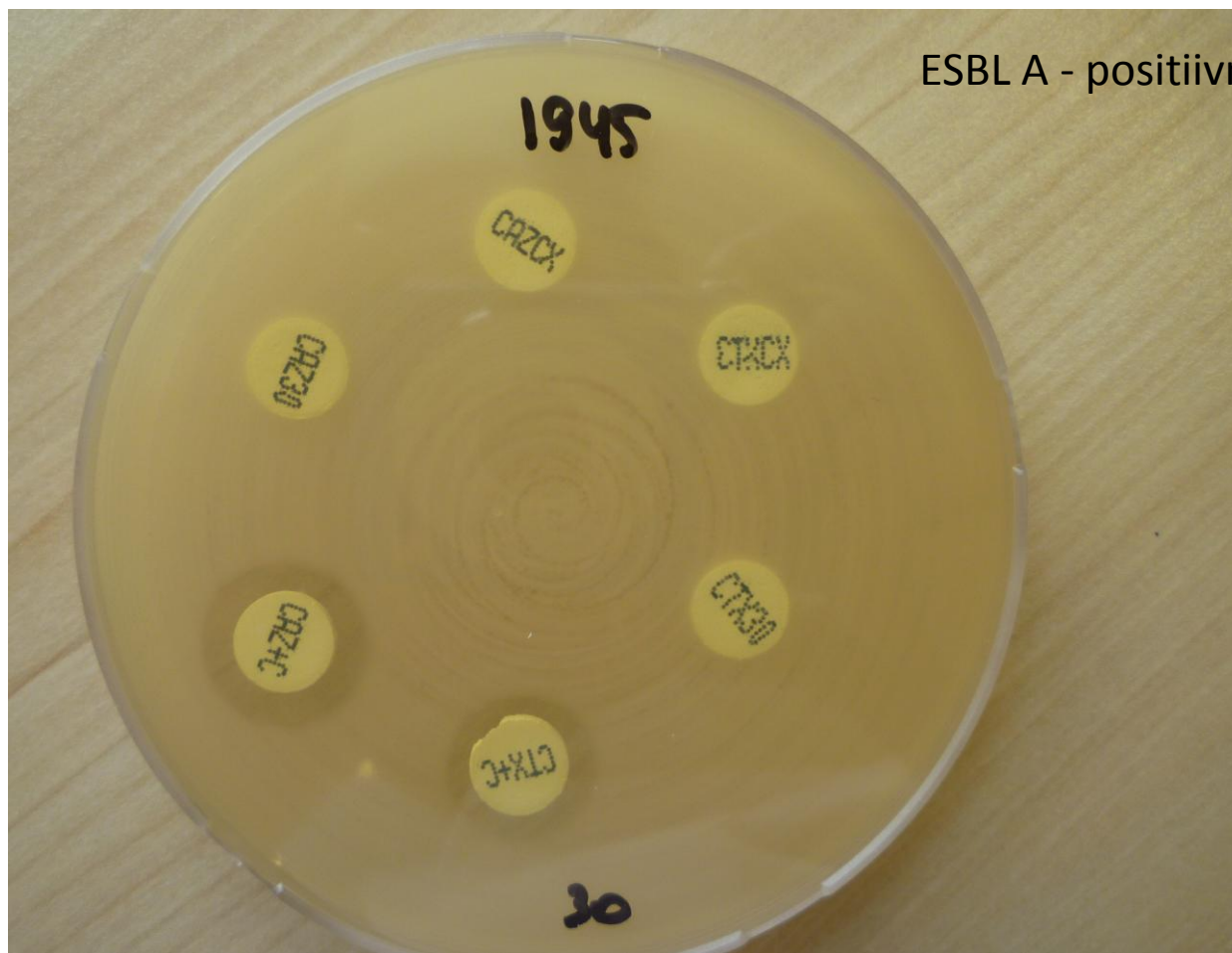
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6 tüvi – *Klebsiella pneumoniae*



MBL = VIM

6 tüvi – *Klebsiella pneumoniae*



ESBL A - positiivne

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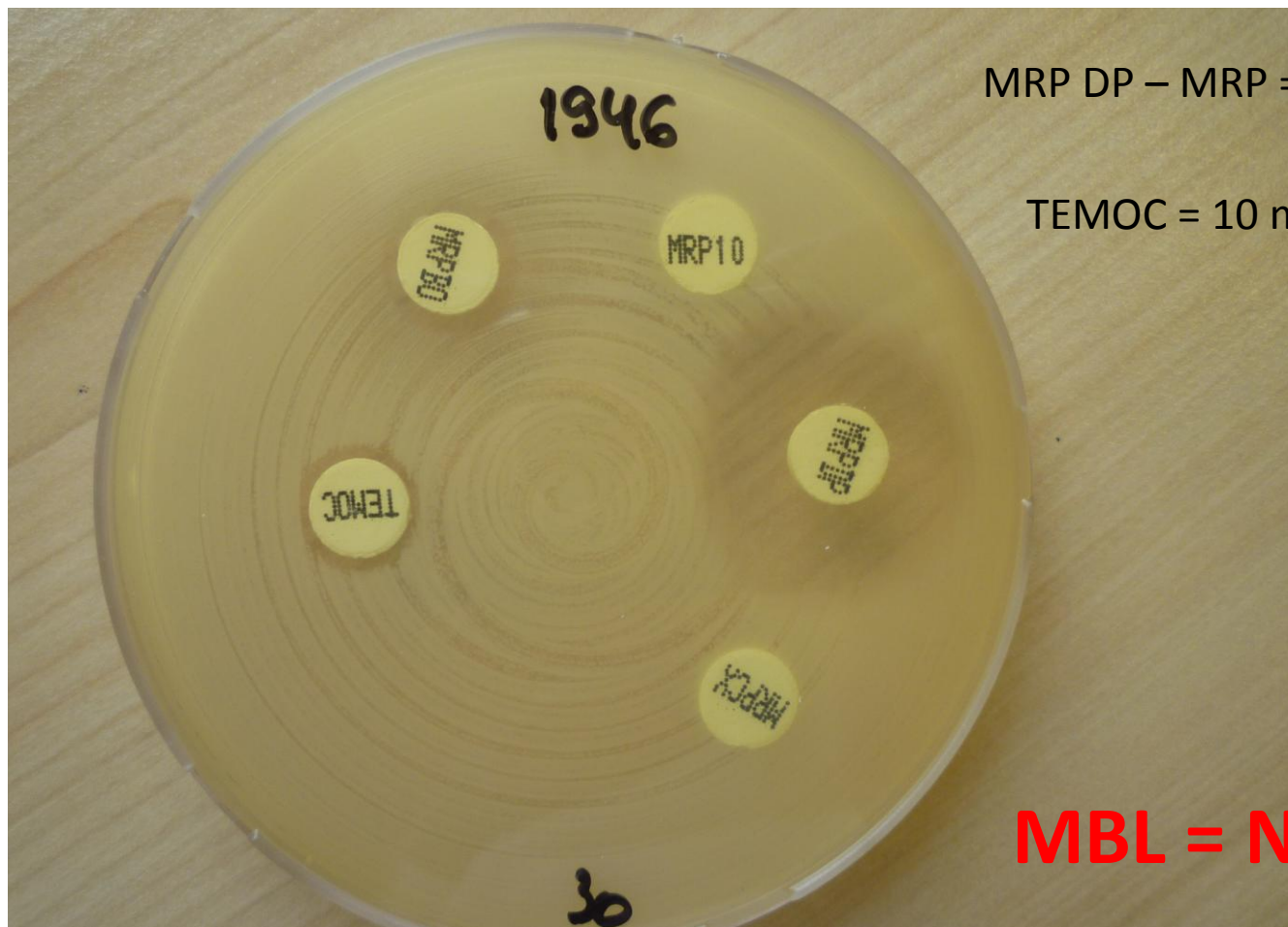
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Agent	Specimen Number				
	1945	1946	1947	1948	1949
	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>	<i>Enterobacter aerogenes</i>
Amikacin	I*	R	R	R*	S
Amoxicillin	R	R	R	R	R
Amoxicillin/Clavulanate	R	R	R	R	R
Aztreonam	S	R	S*	R	R*
Cefepime	R	R	R	R	S
Cefotaxime	R	R	R	R	R
Ceftazidime	R	R	R	R	R
Ciprofloxacin	R	R	R	R	S
Colistin	S	S	S	S	S
Ertapenem	R	R	R	R	R
Fosfomycin	S*	Not assigned	S*	R*	S*
Gentamicin	S	R	R	R	S
Imipenem	R	R	I/R	R*	I
Meropenem	R	R	R	R*	I
Piperacillin-Tazobactam	R	R	R	R	R
Tigecycline	Not assigned	Not assigned	R	Not assigned	Not assigned
Tobramycin	R	R	R	R	S
Trimethoprim/Sulfamethoxazole	R*	R*	Not assigned	R*	S*
Carbapenemase gene	VIM	NDM	IMP	NDM	Not applicable

Key: Not assigned = no reference result and no consensus
 * = consensus result
 S = susceptible I = intermediate R = resistant

7 tüvi – *Klebsiella pneumoniae*



MRP DP – MRP = 15 mm

TEMOC = 10 mm

MBL = NDM

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Agent	Specimen Number				
	1945	1946	1947	1948	1949
	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>	<i>Enterobacter aerogenes</i>
Amikacin	I*	R	R	R*	S
Amoxicillin	R	R	R	R	R
Amoxicillin/Clavulanate	R	R	R	R	R
Aztreonam	S	R	S*	R	R*
Cefepime	R	R	R	R	S
Cefotaxime	R	R	R	R	R
Ceftazidime	R	R	R	R	R
Ciprofloxacin	R	R	R	R	S
Colistin	S	S	S	S	S
Ertapenem	R	R	R	R	R
Fosfomycin	S*	Not assigned	S*	R*	S*
Gentamicin	S	R	R	R	S
Imipenem	R	R	I/R	R*	I
Meropenem	R	R	R	R*	I
Piperacillin-Tazobactam	R	R	R	R	R
Tigecycline	Not assigned	Not assigned	R	Not assigned	Not assigned
Tobramycin	R	R	R	R	S
Trimethoprim/Sulfamethoxazole	R*	R*	Not assigned	R*	S*
Carbapenemase gene	VIM	NDM	IMP	NDM	Not applicable

Key: Not assigned = no reference result and no consensus

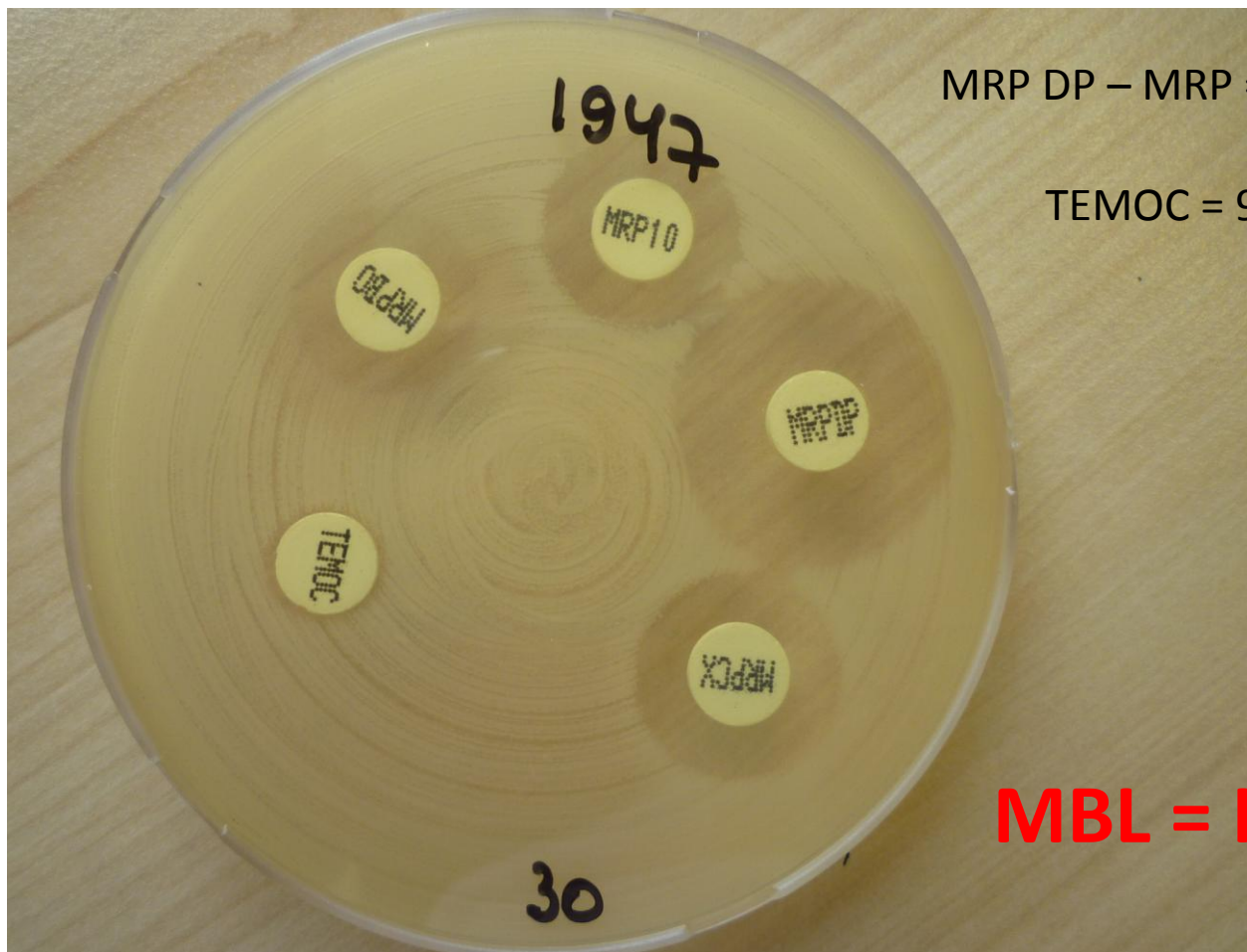
* = consensus result

S = susceptible

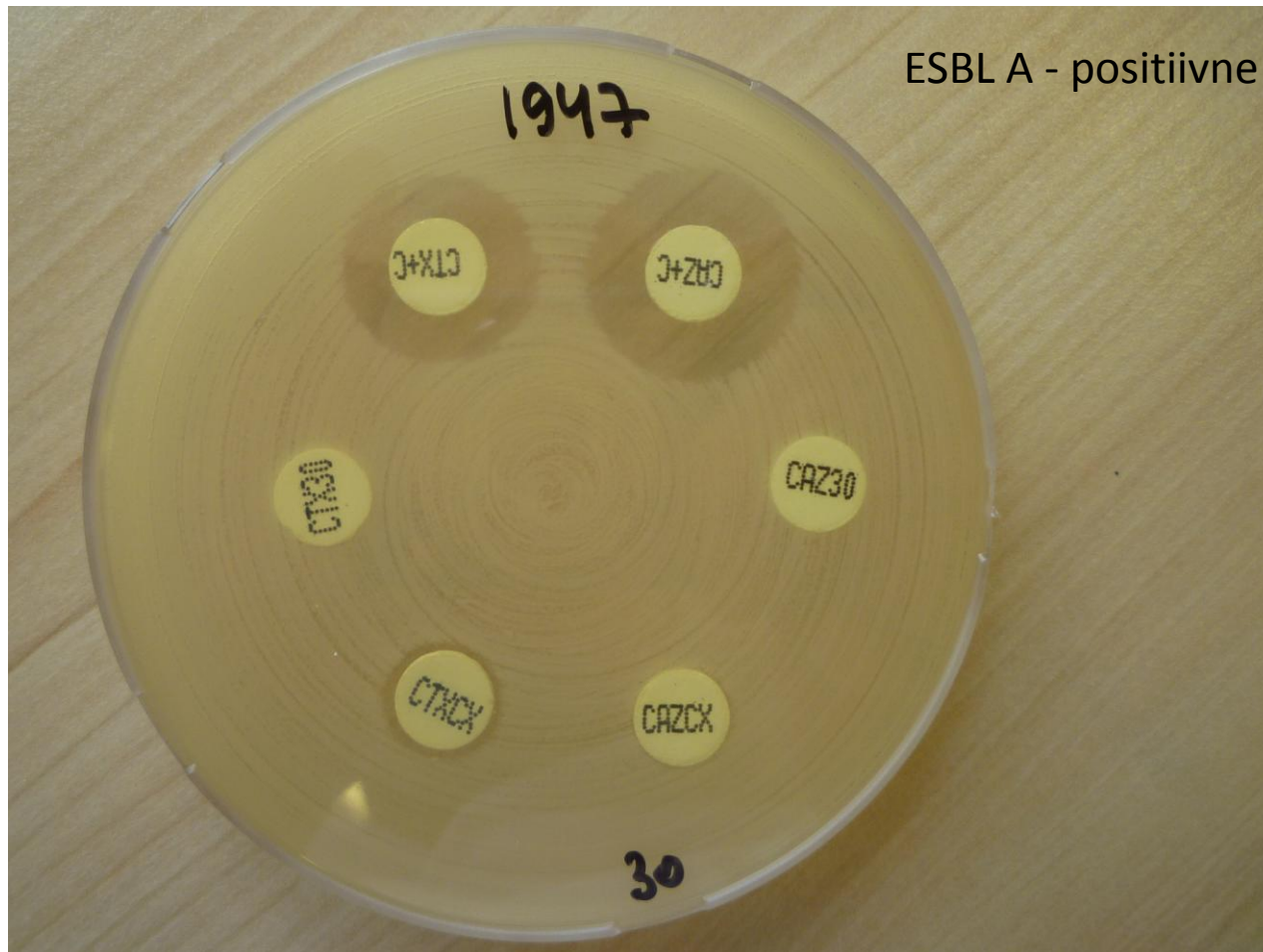
I = intermediate

R = resistant

8 tüvi – *Klebsiella pneumoniae*



8 tüvi – *Klebsiella pneumoniae*



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Agent	Specimen Number				
	1945	1946	1947	1948	1949
	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>	<i>Enterobacter aerogenes</i>
Amikacin	I*	R	R	R*	S
Amoxicillin	R	R	R	R	R
Amoxicillin/Clavulanate	R	R	R	R	R
Aztreonam	S	R	S*	R	R*
Cefepime	R	R	R	R	S
Cefotaxime	R	R	R	R	R
Ceftazidime	R	R	R	R	R
Ciprofloxacin	R	R	R	R	S
Colistin	S	S	S	S	S
Ertapenem	R	R	R	R	R
Fosfomycin	S*	Not assigned	S*	R*	S*
Gentamicin	S	R	R	R	S
Imipenem	R	R	I/R	R*	I
Meropenem	R	R	R	R*	I
Piperacillin-Tazobactam	R	R	R	R	R
Tigecycline	Not assigned	Not assigned	R	Not assigned	Not assigned
Tobramycin	R	R	R	R	S
Trimethoprim/Sulfamethoxazole	R*	R*	Not assigned	R*	S*
Carbapenemase gene	VIM	NDM	IMP	NDM	Not applicable

Key: Not assigned = no reference result and no consensus

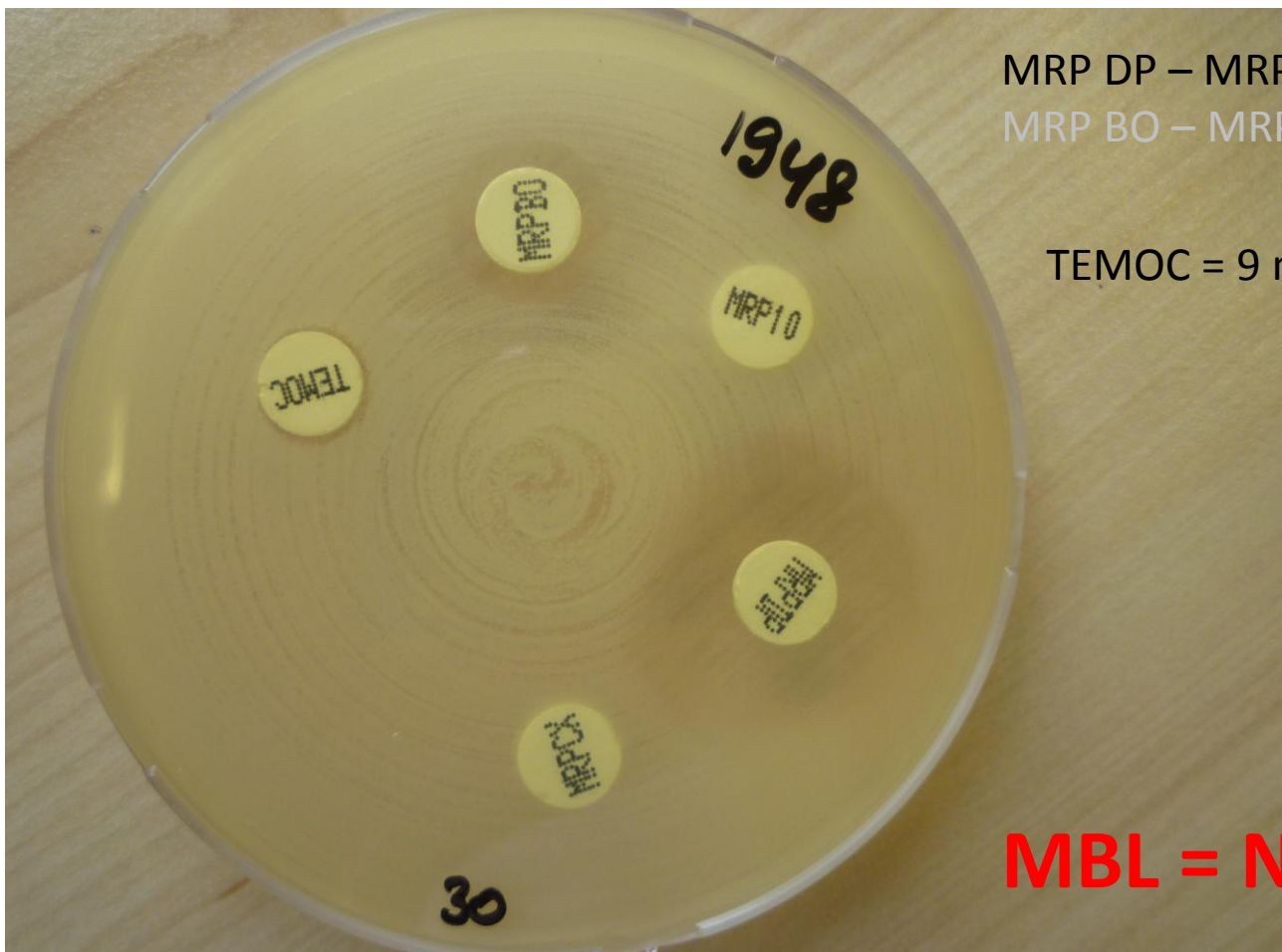
* = consensus result

S = susceptible

I = intermediate

R = resistant

9 tüvi – *Klebsiella pneumoniae*



MRP DP – MRP = 12 mm

MRP BO – MRP = 6 mm

TEMOC = 9 mm

MBL = NDM

9 tüvi – *Klebsiella pneumoniae*



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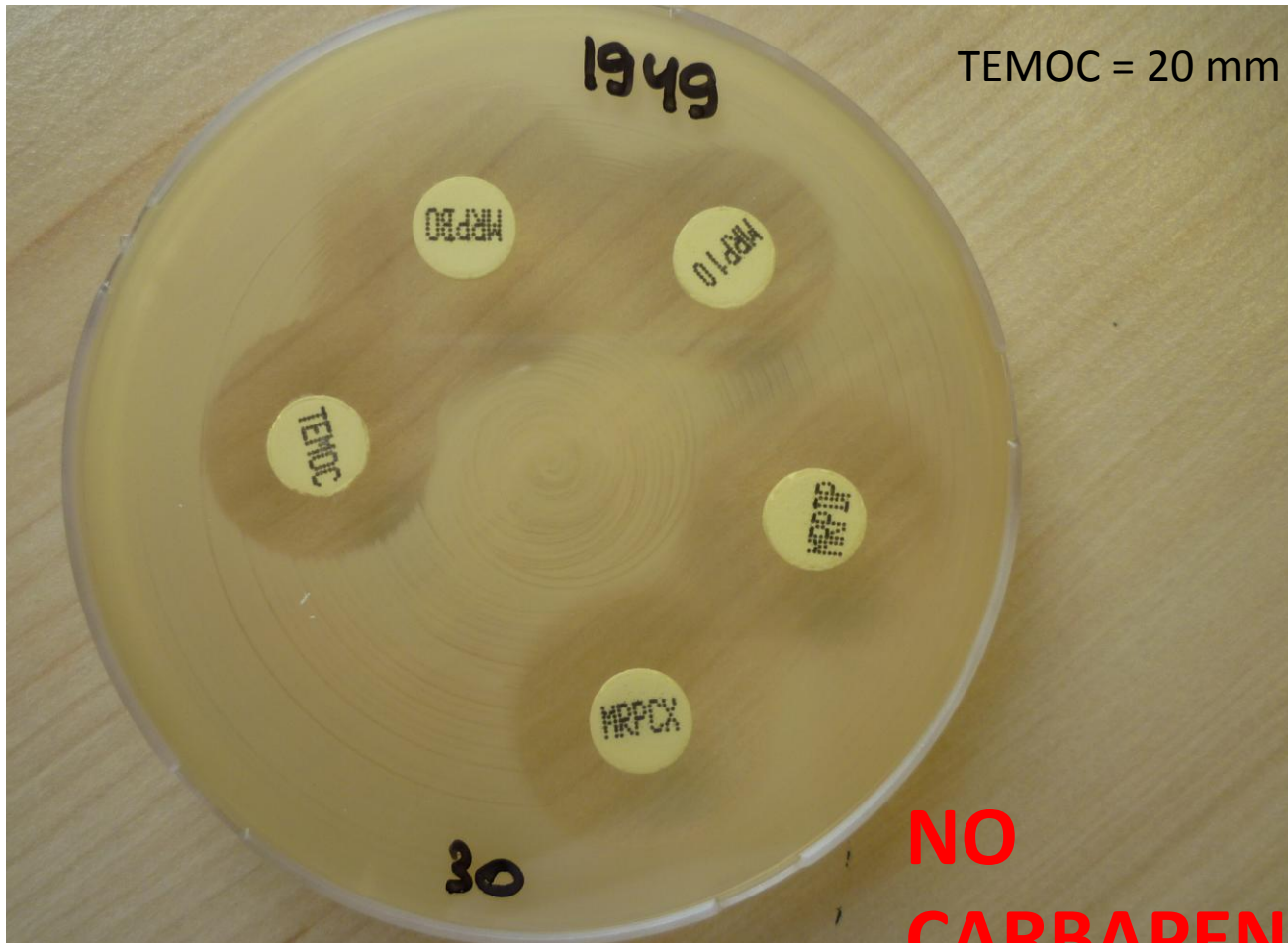
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Agent	Specimen Number				
	1945	1946	1947	1948	1949
	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>	<i>Enterobacter aerogenes</i>
Amikacin	I*	R	R	R*	S
Amoxicillin	R	R	R	R	R
Amoxicillin/Clavulanate	R	R	R	R	R
Aztreonam	S	R	S*	R	R*
Cefepime	R	R	R	R	S
Cefotaxime	R	R	R	R	R
Ceftazidime	R	R	R	R	R
Ciprofloxacin	R	R	R	R	S
Colistin	S	S	S	S	S
Ertapenem	R	R	R	R	R
Fosfomycin	S*	Not assigned	S*	R*	S*
Gentamicin	S	R	R	R	S
Imipenem	R	R	I/R	R*	I
Meropenem	R	R	R	R*	I
Piperacillin-Tazobactam	R	R	R	R	R
Tigecycline	Not assigned	Not assigned	R	Not assigned	Not assigned
Tobramycin	R	R	R	R	S
Trimethoprim/Sulfamethoxazole	R*	R*	Not assigned	R*	S*
Carbapenemase gene	VIM	NDM	IMP	NDM	Not applicable

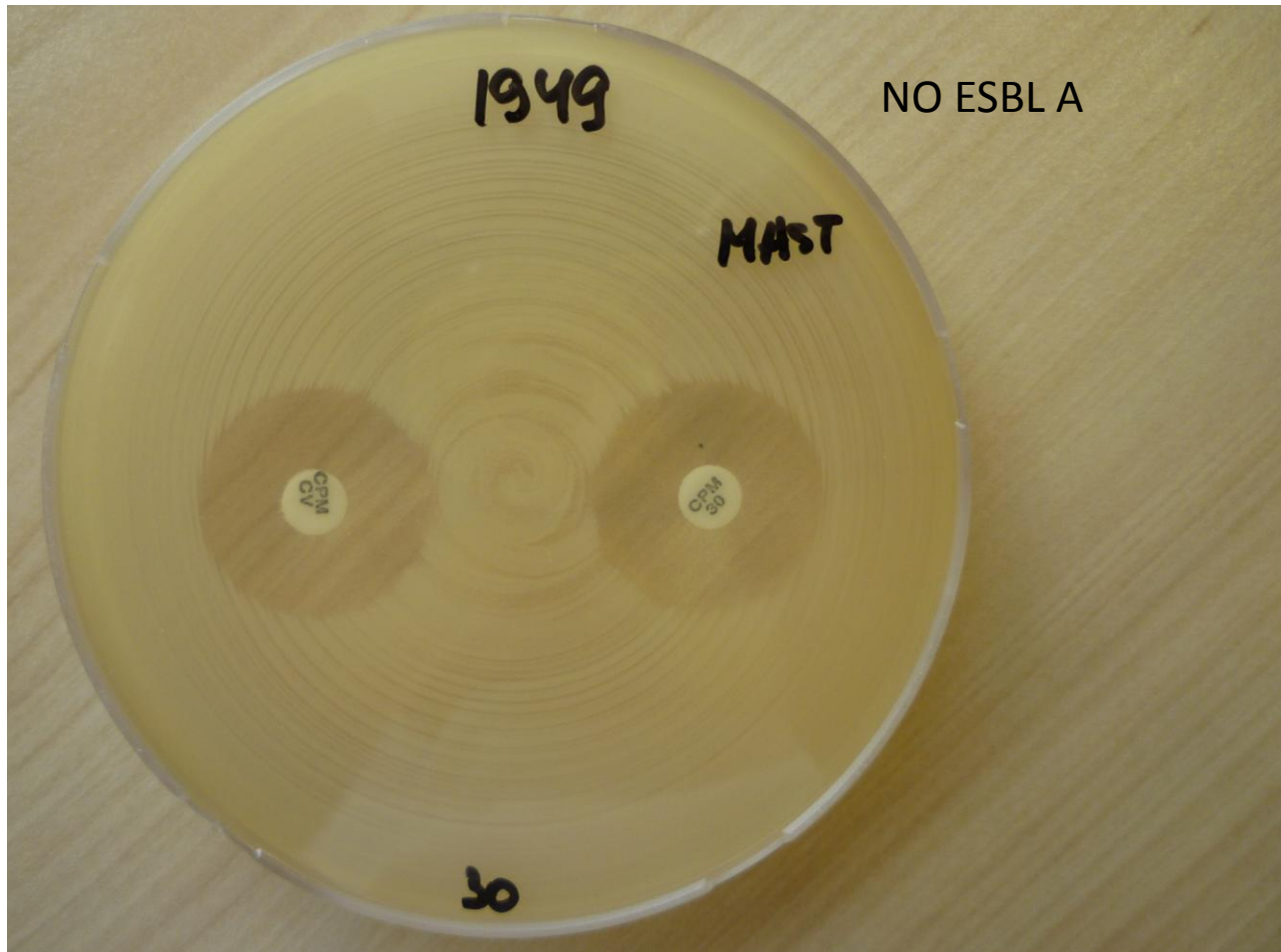
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10 tüvi – *Enterobacter aerogenes*



**NO
CARBAPENEMASE**

10 tüvi – *Enterobacter aerogenes*



Kontrolltüved

- Molekulaarsed tulemused Anastasia presentatsioonis
- Tüved on ITK kollektsioonis sügavkülmutatud
- Karbapeneemi olemasolu esmases antibiogrammis on tähtis (OXA – 48 type)
- Eesti score EQA – 100 %
- Euroopa tulemused...