api® 20 E™

IVD

Identification system for *Enterobacteriaceae* and other non-fastidious Gram-negative rods

SUMMARY AND EXPLANATION

API 20 E is a standardized identification system for *Enterobacteriaceae* and other non-fastidious, Gram-negative rods which uses 21 miniaturized biochemical tests and a database. The complete list of those organisms that it is possible to identify with this system is given in the Identification Table at the end of this package insert.

PRINCIPLE

The API 20 E strip consists of 20 microtubes containing dehydrated substrates. These tests are inoculated with a bacterial suspension that reconstitutes the media. During incubation, metabolism produces color changes that are either spontaneous or revealed by the addition of reagents.
The reactions are read according to the Reading Table and the identification is obtained by referring to the Analytical Profile Index or using the identification software.

CONTENT OF THE KIT

Kit for 25 tests (ref. 20 100)

- 25 API 20 E strips
- 25 incubation boxes
- 25 result sheets
- 1 clip seal
- 1 package insert

Kit for 100 tests (ref. 20 160)

- 100 API 20 E strips (4x25 strips)
- 100 incubation boxes
- 100 result sheets
- 1 clip seal
- 1 package insert

COMPOSITION OF THE STRIP

The composition of the API 20 E strip is given in the Reading Table of this package insert.

REAGENTS AND MATERIAL REQUIRED BUT NOT PROVIDED

Reagents

- API NaCl 0.85 % Medium, 5 ml (Ref. 20 230) or API Suspension Medium, 5 ml (Ref. 20 150)
- API 20 E reagent kit (Ref. 20 120) or individual reagents : TDA (Ref. 70 402)
  JAMES (Ref. 70 542)
  VP 1 + VP 2 (Ref. 70 422)
  NIT 1 + NIT 2 (Ref. 70 442)
- Zn reagent (Ref. 70 380)
- Oxidase (Ref. 55 635*)
  * reference not sold in certain countries : use an equivalent reagent.
- Mineral oil (Ref. 70 100)
- API 20 E Analytical Profile Index (Ref. 20 190) or **api*web*™** identification software (Ref. 40 011) (consult bioMérieux)

Material

- Pipettes or PSIpettes
- Ampule protector
- Ampule rack
- General microbiology laboratory equipment

POSSIBLE ADDITIONAL REAGENTS

- API OF Medium (Ref. 50 110) :
  Test for the determination of fermentative or oxidative metabolism.
- API M Medium (Ref. 50 120) :
  Test for motility of facultative anaerobic bacteria.

WARNINGS AND PRECAUTIONS

- **For *in vitro* diagnostic use and microbiological control.**
- **For professional use only.**
- This kit contains products of animal origin. Certified knowledge of the origin and/or sanitary state of the animals does not totally guarantee the absence of transmissible pathogenic agents. It is therefore recommended that these products be treated as potentially infectious, and handled observing the usual safety precautions (do not ingest or inhale).
- All specimens, microbial cultures and inoculated products should be considered infectious and handled appropriately. Aseptic technique and usual precautions for handling the bacterial group studied should be observed throughout this procedure. Refer to "CLSI® M29-A, *Protection of Laboratory Workers from Occupationally Acquired Infections*; *Approved Guideline* - Current revision". For additional handling precautions, refer to "Biosafety in Microbiological and Biomedical Laboratories - CDC/NIH - Latest edition", or to the regulations currently in use in each country.
- Do not use reagents past the expiry date.
- Before use, check that the packaging of the various components is intact.
- Do not use strips which have been damaged : cupules deformed, desiccant sachet open, etc.
- The performance data presented were obtained using the procedure indicated in this package insert. Any change or modification in the procedure may affect the results.
- Interpretation of the test results should be made taking into consideration the patient history, the source of the specimen, colonial and microscopic morphology of the strain and, if necessary, the results of any other tests performed, particularly the antimicrobial susceptibility patterns.

STORAGE CONDITIONS

The strips are supplied in an aluminum pouch with desiccant sachets.
Once opened (*), the pouch should be re-sealed using the clip seal (included in the kit) to preserve the remaining strips with the desiccant sachets : place the open end of the pouch along the seal and carefully clamp between the two parts. The strips may then be kept for up to **10 months after the pouch has been opened**, at 2-8°C (or until the expiry date indicated on the packaging, if this comes before).
(*) *Recommended method for opening the pouches* : cut open the pouch just below the seal while holding the pouch upright, in order to avoid damaging the desiccant sachets.

SPECIMENS (COLLECTION AND PREPARATION)

API 20 E is not for use directly with clinical or other specimens.
The microorganisms to be identified must first be isolated on a culture medium adapted to the culture of *Enterobacteriaceae* and/or non-fastidious Gram-negative rods, according to standard microbiological techniques.

INSTRUCTIONS FOR USE

Oxidase test

The oxidase test must be performed according to the manufacturer's instructions for use. The result should be recorded on the result sheet as it is an integral part of the final profile (21st identification test).

Preparation of the strip

- Prepare an incubation box (tray and lid) and distribute about 5 ml of distilled water or demineralized water [or any water without additives or chemicals which may release gases (e.g., Cl_2, CO_2, etc.)] into the honeycombed wells of the tray to create a humid atmosphere.
- Record the strain reference on the elongated flap of the tray. (Do not record the reference on the lid as it may be misplaced during the procedure).
- Remove the strip from its packaging.
- Place the strip in the incubation box.

NOTE : API 20 E should only be used with *Enterobacteriaceae* and/or non-fastidious Gram-negative rods. Fastidious organisms having demanding nutritional requirements and requiring appropriate handling precautions (i.e., *Brucella* and *Francisella*) are not included in the API 20 E database. Alternative procedures must be used to exclude or confirm their presence.

Preparation of the inoculum

- Open an ampule of API NaCl 0.85 % Medium (5 ml) or an ampule of API Suspension Medium (5 ml) as indicated in the paragraph "Warnings and Precautions" of the package insert for these products, or use any tube containing 5 ml of sterile saline or sterile distilled water, without additives.
- Using a pipette or PSIpette, remove a single well-isolated colony from an isolation plate. It is recommended to use young cultures (18-24 hours old).
- Carefully emulsify to achieve a homogeneous bacterial suspension.
  This suspension must be used immediately after preparation.

NOTE : most *Vibrio* species are halophilous. If a *Vibrio* is suspected, suspend the bacteria in API NaCl 0.85 % Medium.

Inoculation of the strip

- With the same pipette, distribute the bacterial suspension into the tubes of the strip (to avoid the formation of bubbles at the base of the tubes, tilt the strip slightly forward and place the tip of the pipette or PSIpette against the side of the cupule):
  - For the CIT, VP and GEL tests, fill both tube and cupule,
  - For the other tests, fill only the tubes (and not the cupules),
  - for the tests ADH, LDC, ODC, H_2S and URE, create anaerobiosis by overlaying with mineral oil.
- Close the incubation box.
- Incubate at 36°C ± 2°C for 18-24 hours.

READING AND INTERPRETATION

Reading the strip

- After the incubation period, read the strip by referring to the Reading Table.
- If 3 or more tests (GLU test + or –) are positive, record all the spontaneous reactions on the result sheet and then reveal the tests which require the addition of reagents :
  - TDA Test : add 1 drop of TDA reagent. A **reddish brown** color indicates a **positive** reaction to be recorded on the result sheet.
  - IND Test : add 1 drop of JAMES reagent. A **pink** color developed in the whole cupule indicates a **positive** reaction to be recorded on the result sheet.
  - VP Test : add 1 drop each of VP 1 and VP 2 reagents. Wait at least 10 minutes. A **pink** or **red** color indicates a **positive** reaction to be recorded on the result sheet. If a **slightly pink** color appears after 10 minutes, the reaction should be considered **negative**.

  NOTE : The indole production test must be performed last since this reaction releases gaseous products which interfere with the interpretation of other tests on the strip. The plastic incubation lid should not be replaced after the addition of the reagent.
- If the number of positive tests (including the GLU test) before adding the reagents is less than 3 :
  - Reincubate the strip for a further 24 hours (± 2 hours) without adding any reagents.
  - Reveal the tests requiring the addition of reagents (see previous paragraph).
  - To complete the identification, it may be necessary to perform supplementary tests (refer to Identification paragraph).

Interpretation

Identification is obtained with the **numerical profile**.

- Determination of the numerical profile :
  On the result sheet, the tests are separated into groups of 3 and a value 1, 2 or 4 is indicated for each. By adding together the values corresponding to positive reactions within each group, a 7-digit profile number is obtained for the 20 tests of the API 20 E strip. The oxidase reaction constitutes the 21st test and has a value of 4 if it is positive.
- Identification :
  This is performed using the database (V4.1)
  * with the Analytical Profile Index :
    - Look up the numerical profile in the list of profiles.
  * with the **api*web*** **™** identification software :
    - Enter the 7-digit numerical profile manually via the keyboard.

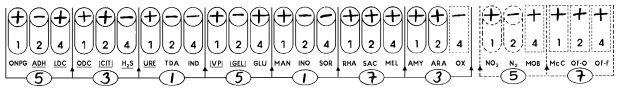
In some cases, the 7-digit profile is not discriminatory enough and the following supplementary tests need to be carried out :

- Reduction of nitrates to nitrites (NO_2) and N_2 gas (N_2) : add 1 drop each of NIT 1 and NIT 2 reagents to the GLU tube. Wait 2 to 5 minutes. A **red** color indicates a **positive** reaction (NO_2). A negative reaction (yellow) may be due to the reduction to nitrogen (as sometimes evidenced by gas bubbles) : add 2 to 3 mg of Zn reagent to the GLU tube. After 5 minutes, if the tube remains **yellow** this indicates a **positive** reaction (N_2) to be recorded on the result sheet. If the test turns **orange-red**, this is a **negative** reaction : the nitrates still present in the tube have been reduced by the Zinc. This reaction is useful when testing Gram-negative, oxidase positive rods.

NOTE : For the same reason as the indole test (see the note in the paragraph "Reading the strip"), the nitrate reduction test must be performed last.

- Motility (MOB) : Inoculate an ampule of API M Medium (see package insert).
- Growth on MacConkey agar medium (McC) : Streak a MacConkey agar plate (see package insert).
- Oxidation of glucose (OF-O) : Inoculate an ampule of API OF Medium (see package insert).
- Fermentation of glucose (OF-F) : Inoculate an ampule of API OF Medium (see package insert).

These supplementary tests, indicated in the introduction section (Profile coding) of the Analytical Profile Index, may be used to form a 9-digit profile. Identification is then obtained using the identification software.



5 315 173 (57) *Enterobacter gergoviae*

Further tests may be proposed in case of low discrimination. Refer to the identification software or Analytical Profile Index.

QUALITY CONTROL

The media, strips and reagents are systematically quality controlled at various stages of their manufacture.

Streamlined quality control may be used to confirm acceptable performance of the API 20 E system after shipping/storage. This methodology may be performed by following the instructions above for testing and meeting the criteria stated in CLSI® M50-A Quality Control for Commercial Microbial Identification Systems.

Testing may be conducted using ***Proteus mirabilis*** **ATCC® 35659** to evaluate the performance of the ODC and ARA tests. Tests performed by bioMérieux has shown that the ODC and ARA tests are the most labile on the API 20 E strip. When testing the strip, *Proteus mirabilis* ATCC 35659 can be used to detect degradation.

For those users who are required to perform **comprehensive** quality control testing with the strip, the following five strains should be tested to demonstrate positive and negative reactivity for most of the API 20 E tests.

1. *Proteus mirabilis* ATCC 35659
2. *Stenotrophomonas maltophilia* ATCC 51331
3. *Enterobacter cloacae* ATCC 13047
4. *Escherichia coli* ATCC 25922
5. *Klebsiella pneumoniae* ssp *pneumoniae* ATCC 35657

ATCC : American Type Culture Collection, 10801 University Boulevard, Manassas, VA 20110-2209, USA.

	ONPG	ADH	LDC	ODC	CIT	H_2S	URE	TDA	IND	VP	GEL	GLU	MAN	INO	SOR	RHA	SAC	MEL	AMY	ARA	NO_2	N_2*
1.	–	–	–	+	V	+	+	+	–	–	V	+	–	–	–	–	V	–	–	–	+	–
2.	+	–	V	–	V	–	–	–	–	–	+	–	–	–	–	–	–	–	–	–	–	–
3.	+	+	–	V	+	–	–	–	–	+	–	+	+	V	+	+	+	+	+	+	+	–
4.	+	–	+	+	–	–	–	–	+	–	–	+	+	–	+	+	–	+	–	+	+	–
5.	+	–	+	–	+	–	V	–	–	V	–	+	+	+	+	+	+	+	+	+	+	–

* The N_2 (+) state may be observed for the strains ATCC 13047, ATCC 25922 and **ATCC 35657.**

- Profile obtained after 24-48 hours of incubation for the strain ATCC 51331, using colonies grown on Trypticase Soy agar + blood.
- Profiles obtained after 18-24 hours of incubation for the other strains, using colonies grown on Trypticase Soy agar + blood.
- Bacterial suspensions prepared in API NaCl 0.85 % Medium.

It is the responsibility of the user to perform Quality Control in accordance with any local applicable regulations.

LIMITATIONS OF THE METHOD

- The API 20 E system is intended uniquely for the identification of *Enterobacteriaceae* and those non-fastidious, Gram-negative rods included in the database (see Identification Table at the end of this package insert). It cannot be used to identify any other microorganisms or to exclude their presence.
- Discrepancies with respect to conventional methods may be observed. They are due to the different principles of the reactions used in the API technique. In addition, substrate variations exist that also account for percentage differences.
- On rare occasions, the glucose reactions for organisms such as *Klebsiella* or *Proteus* may revert from positive to negative, in which instance a bluish-green color is seen. This reaction will be recorded as a negative reaction. Such occurrences are reflected in the percentages indicated in the Identification Table.
- If *Salmonella* or *Shigella* are identified, serological identification must be performed to confirm the bacterial identification.
- Nonfermentative, Gram-negative rods, isolated from patients with cystic fibrosis, may generate atypical biochemical profiles, which may affect identification.
- Only pure cultures of a single organism should be used.

RANGE OF EXPECTED RESULTS

Consult the Identification Table at the end of this package insert for the range of expected results for the various biochemical reactions.

PERFORMANCE

- *Enterobacteriaceae* :
  5514 collection strains and strains of various origins belonging to species included in the database were tested:
  - 92.80 % of the strains were correctly identified (with or without supplementary tests).
  - 4.61 % of the strains were not identified.
  - 2.59 % of the strains were misidentified.
- Other non-fastidious Gram-negative rods :
  2386 collection strains and strains of various origins belonging to species included in the database were tested :
  - 90.32 % of the strains were correctly identified (with or without supplementary tests).
  - 6.16 % of the strains were not identified.
  - 3.52 % of the strains were misidentified.

WASTE DISPOSAL

Dispose of used or unused reagents as well as any other contaminated disposable materials following procedures for infectious or potentially infectious products.
It is the responsibility of each laboratory to handle waste and effluents produced according to their type and degree of hazardousness and to treat and dispose of them (or have them treated and disposed of) in accordance with any applicable regulations.

WARRANTY

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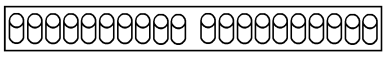
METHODOLOGIE / PROCEDURE / METHODIK / TECNICA / PROCEDIMENTO / ΔΙΑΔΙΚΑΣΙΑ / METOD / METODYKA

OX

1 colonie / 1 colony / 1 Kolonie /
1 colonia / 1 colónia / 1 αποικία /
1 koloni / 1 kolonia

API NaCl 0.85 % Medium 5 ml /
API Suspension Medium 5 ml



API 20 E

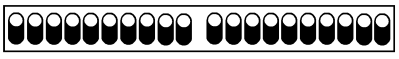
- CIT
- VP
- GEL

ADH ⟶ ODC
H_2S - URE

18:00-24:00 / 48:00

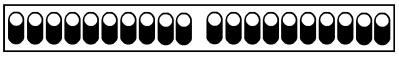
36°C ± 2°C

Tests ⊕ < 3
(y compris / including / einschließlich / incluído / compreso / incluindo / συμπεριλαμβάνεται / inklusive / inklusiv / włączając test GLU)



API 20 E

TDA : **TDA**
IND : **JAMES**
VP : **VP 1 + VP 2**
GLU (NO_2) : **NIT 1 + NIT 2 (+Zn)**



API 20 E

+ - + - + -

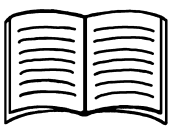


TABLEAU D'IDENTIFICATION / IDENTIFICATION TABLE / PROZENTTABELLE / TABLA DE IDENTIFICACION / TABELLA DI IDENTIFICAZIONE / QUADRO DE IDENTIFICAÇÃO ΠΙΝΑΚΑΣ ΤΑΥΤΟΠΟΙΗΣΗΣ / IDENTIFIKATIONSTABEL / IDENTIFIERINGSTABELL / TABELA IDENTYFIKACYJNA

% de réactions positives après 18-24 / 48 h à 36°C ± 2°C / % of positive reactions after 18-24 / 48 hrs. at 36°C ± 2°C / % der positiven Reaktionen nach 18-24 / 48 h bei 36°C ± 2°C /
% de las reacciones positivas después de 18-24 / 48 H a 36°C ± 2°C / % di reazioni positive dopo 18-24 / 48 ore a 36°C ± 2°C / % de reacções positivas após 18-24 / 48 h a 36º C ± 2º C /
% θετικών αντιδράσεων μετά από 18-24 / 48 ώρες στους 36°C ± 2°C / % positiva reaktioner efter 18-24 / 48 timmar vid 36°C ± 2°C / % af positive reaktioner efter 18-24 / 48 timer ved 36°C ± 2°C /
% pozytywnych reakcji po 18-24 / 48 godzinach w 36°C ± 2°C

API 20 E V4.1	ONPG	ADH	LDC	ODC	CIT	H2S	URE	TDA	IND	VP	GEL	GLU	MAN	INO	SOR	RHA	SAC	MEL	AMY	ARA	OX	NO2	N2	MOB	McC	OF/O	OF/F
Buttiauxella agrestis	100	0	0	85	25	0	0	0	0	0	0	100	100	0	1	99	0	92	99	100	0	100	0	100	100	100	100
Cedecea davisae	99	89	0	99	75	0	0	0	0	89	0	100	100	10	0	0	100	0	100	1	0	99	0	87	100	100	100
Cedecea lapagei	99	99	0	0	75	0	0	0	0	90	0	100	99	0	0	0	0	1	100	1	0	99	0	87	100	100	100
Citrobacter braakii	50	45	0	99	75	81	1	0	4	0	0	100	100	1	100	100	1	91	99	99	0	100	0	95	100	100	100
Citrobacter freundii	90	24	0	0	75	75	1	0	1	0	0	100	99	25	99	99	99	82	40	99	0	98	0	95	100	100	100
Citrobacter koseri/amalonaticus	99	75	0	100	97	0	1	0	99	0	0	100	100	25	99	99	1	1	98	99	0	100	0	95	100	100	100
Citrobacter koseri/farmeri	99	2	0	100	25	0	1	0	99	0	0	100	100	1	99	99	99	80	99	99	0	100	0	95	100	100	100
Citrobacter youngae	100	50	0	1	80	80	0	0	1	0	0	100	100	0	95	100	1	0	25	100	0	85	0	95	100	100	100
Edwardsiella hoshinae	0	0	100	99	50	94	0	0	99	0	0	100	100	0	0	1	100	0	0	1	0	100	0	100	100	100	100
Edwardsiella tarda	0	0	100	99	1	75	0	0	99	0	0	100	0	0	0	0	0	0	0	0	0	100	0	98	100	100	100
Enterobacter aerogenes	99	0	99	98	82	0	1	0	0	85	0	99	99	99	99	99	99	99	99	99	0	100	0	97	100	100	100
Enterobacter amnigenus 1	99	25	0	99	40	0	0	0	0	75	0	100	100	0	1	100	99	99	99	99	0	100	0	92	100	100	100
Enterobacter amnigenus 2	99	80	0	99	80	0	0	0	0	75	0	100	100	0	99	100	1	99	99	99	0	100	0	100	100	100	100
Enterobacter asburiae	100	25	0	99	80	0	0	0	0	10	0	100	99	25	100	0	99	0	100	100	0	100	0	95	100	100	100
Enterobacter cancerogenus	100	75	0	99	99	0	0	0	0	89	0	100	100	0	1	100	1	1	100	100	0	100	0	99	100	100	100
Enterobacter cloacae	98	82	1	92	90	0	1	0	0	85	0	99	99	12	90	85	96	90	99	99	0	100	0	95	100	100	100
Enterobacter gergoviae	99	0	32	100	75	0	99	0	0	90	0	100	99	23	1	100	99	100	99	100	0	100	0	90	100	100	100
Enterobacter intermedius	99	0	0	99	1	0	0	0	0	2	0	100	97	0	88	99	40	100	99	99	0	100	0	92	100	100	100
Enterobacter sakazakii	100	96	0	91	94	0	1	0	25	91	10	100	100	75	8	99	99	99	99	99	0	100	0	96	100	100	100
Escherichia coli 1	90	1	74	70	0	1	3	0	89	0	0	99	98	1	91	82	36	75	3	99	0	100	0	95	100	100	100
Escherichia coli 2	26	1	45	20	0	1	1	0	50	0	0	99	90	1	42	30	3	3	1	70	0	98	0	5	100	100	100
Escherichia fergusonii	96	1	99	100	1	0	0	0	99	0	0	100	99	1	0	87	0	1	99	99	0	100	0	93	100	100	100
Escherichia hermannii	100	0	1	100	1	0	0	0	99	0	0	100	100	0	0	99	25	0	99	99	0	100	0	99	100	100	100
Escherichia vulneris	100	30	50	0	0	0	0	0	0	0	0	100	100	0	1	95	7	95	95	99	0	100	0	100	100	100	100
Ewingella americana	98	0	0	0	75	0	0	0	0	95	1	99	99	0	0	1	0	1	50	1	0	100	0	60	100	100	100
Hafnia alvei 1	75	0	99	98	50	0	10	0	0	50	0	99	99	0	1	99	0	0	25	99	0	100	0	85	100	100	100
Hafnia alvei 2	50	0	99	99	1	0	1	0	0	10	0	99	98	0	1	1	1	0	0	1	0	100	0	0	100	100	100
Klebsiella oxytoca	99	0	80	0	89	0	78	0	99	80	0	100	100	99	100	99	99	100	100	100	0	100	0	0	100	100	100
Klebsiella pneumoniae ssp ozaenae	94	18	25	1	18	0	1	0	0	1	0	99	96	57	66	58	20	80	97	85	0	92	0	0	100	100	100
Klebsiella pneumoniae ssp pneumoniae	99	0	73	0	86	0	75	0	0	90	0	100	99	99	99	99	99	99	99	99	0	100	0	0	100	100	100
Klebsiella pneumoniae ssp rhinoscleromatis	1	0	0	0	0	0	0	0	0	0	0	99	100	90	90	75	75	1	99	10	0	100	0	0	100	100	100
Kluyvera spp	95	0	25	99	60	0	0	0	80	0	0	100	99	0	25	93	89	99	99	99	0	95	0	94	100	100	100
Leclercia adecarboxylata	99	0	0	0	0	0	1	0	99	0	1	100	99	0	2	100	66	99	99	100	0	100	0	100	100	100	100
Moellerella wisconsensis	97	0	0	0	40	0	0	0	15	1	0	100	1	0	0	0	100	99	0	0	0	90	0	0	100	100	100
Morganella morganii	1	0	10	98	1	1	99	93	99	0	0	99	0	0	0	0	1	0	0	0	0	88	0	95	100	100	100
Pantoea spp 1	85	1	0	0	13	0	1	0	1	9	1	100	99	1	26	1	98	26	59	61	0	85	0	85	100	100	100
Pantoea spp 2	99	1	0	0	99	0	1	0	53	62	4	100	99	36	82	90	98	81	99	99	0	85	0	85	100	100	100
Pantoea spp 3	99	1	0	0	21	0	1	0	1	86	15	100	99	34	1	97	93	23	65	97	0	85	0	85	100	100	100
Pantoea spp 4	86	1	0	0	29	0	1	0	59	1	1	99	100	10	32	99	72	89	99	99	0	85	0	85	100	100	100
Proteus mirabilis	1	0	0	99	50	75	99	98	1	1	82	98	0	0	0	0	1	0	0	0	0	93	0	95	100	100	100
Proteus penneri	1	0	0	0	1	20	100	99	0	0	50	99	0	0	0	0	100	0	1	0	0	99	0	85	100	100	100
Proteus vulgaris group	1	0	0	0	12	83	99	99	92	0	74	99	1	1	0	1	89	0	66	1	0	100	0	94	100	100	100
Providencia alcalifaciens/rustigianii	0	0	0	0	80	0	0	100	99	0	0	99	1	1	0	0	1	0	0	1	0	100	0	96	100	100	100
Providencia rettgeri	1	1	0	0	74	0	99	99	90	0	0	98	82	78	1	50	25	0	40	1	0	98	0	94	100	100	100
Providencia stuartii	1	0	0	0	85	0	30	98	95	0	0	98	3	80	0	0	15	0	0	0	0	100	0	85	100	100	100
Rahnella aquatilis	100	0	0	0	50	0	0	1	0	99	0	100	100	0	98	99	100	97	100	98	0	100	0	6	100	100	100
Raoultella ornithinolytica	100	0	99	99	99	0	85	0	100	65	0	100	100	99	100	100	100	100	100	100	0	100	0	0	100	100	100
Raoultella terrigena	100	0	99	6	52	0	0	0	0	75	0	99	99	99	99	99	100	100	100	99	0	100	0	0	100	100	100
Salmonella choleraesuis ssp arizonae	98	75	97	98	75	99	0	0	1	0	0	100	99	0	99	99	1	78	0	99	0	100	0	99	100	100	100
Salmonella choleraesuis ssp choleraesuis	0	15	99	99	6	64	0	0	0	0	0	100	99	0	98	99	0	20	0	0	0	100	0	95	100	100	100
Salmonella ser.Gallinarum	0	1	100	1	0	25	0	0	0	0	0	100	100	0	0	1	0	0	0	100	0	100	0	0	100	100	100

API 20 E V4.1	ONPG	ADH	LDC	ODC	CIT	H2S	URE	TDA	IND	VP	GEL	GLU	MAN	INO	SOR	RHA	SAC	MEL	AMY	ARA	OX	NO2	N2	MOB	McC	OF/O	OF/F
Salmonella ser.Paratyphi A	0	5	0	99	0	1	0	0	0	0	0	100	99	0	99	98	0	96	0	99	0	100	0	95	100	100	100
Salmonella ser.Pullorum	0	1	75	100	0	85	0	0	0	0	0	100	100	0	0	100	0	0	0	75	0	100	0	0	100	100	100
Salmonella typhi	0	1	99	0	0	8	0	0	0	0	0	100	99	0	99	0	0	99	0	0	0	100	0	97	100	100	100
Salmonella spp	1	56	82	93	65	83	0	0	1	0	1	99	100	40	99	86	1	90	1	99	1	100	0	95	100	100	100
Serratia ficaria	99	0	0	0	100	0	0	0	0	40	90	100	100	50	99	74	99	99	100	99	0	92	0	100	100	100	100
Serratia fonticola	99	0	73	99	75	0	0	0	0	0	0	100	100	97	100	99	30	99	99	99	0	99	0	91	100	100	100
Serratia liquefaciens	95	1	78	98	80	0	2	0	0	59	65	100	99	80	98	2	99	72	97	97	0	100	0	95	100	100	100
Serratia marcescens	94	0	95	95	96	0	25	0	1	70	87	100	99	85	98	1	99	68	97	25	0	95	0	97	100	100	100
Serratia odorifera 1	95	0	95	99	95	0	0	0	99	50	99	100	99	99	99	99	99	99	99	99	0	99	0	100	100	100	100
Serratia odorifera 2	95	0	96	1	95	0	0	0	99	50	99	100	99	99	99	99	1	99	99	95	0	99	0	100	100	100	100
Serratia plymuthica	99	0	0	0	65	0	0	0	0	65	50	100	90	70	70	1	99	85	98	98	0	99	0	50	100	100	100
Serratia rubidaea	99	0	30	0	92	0	1	0	0	71	82	99	99	75	1	3	99	95	99	99	0	100	0	85	100	100	100
Shigella spp	1	0	0	1	0	0	0	0	29	0	0	99	63	0	7	7	1	20	0	50	0	100	0	0	100	100	100
Shigella sonnei	96	0	0	93	0	0	0	0	0	0	0	99	99	0	1	75	1	1	0	99	0	100	0	0	100	100	100
Yersinia enterocolitica	80	0	0	90	0	0	98	0	50	5	0	99	99	25	98	1	99	4	75	75	0	98	0	2	100	100	100
Yersinia frederiksenii/intermedia	99	0	0	75	1	0	99	0	99	1	0	100	99	25	99	99	99	1	99	99	0	98	0	5	100	100	100
Yersinia kristensenii	80	0	0	80	0	0	99	0	97	0	0	100	99	10	99	0	0	0	99	99	0	98	0	5	100	100	100
Yersinia pestis	68	0	0	0	0	0	0	0	0	1	0	99	99	0	70	0	0	0	30	30	0	47	0	0	99	100	100
Yersinia pseudotuberculosis	98	0	0	0	1	0	99	0	0	0	0	99	97	0	0	75	0	50	25	50	0	95	0	0	100	100	100
Aeromonas hydrophila gr. 1	98	90	25	1	25	0	0	0	85	25	90	99	99	1	3	5	97	1	75	75	100	97	0	95	99	99	99
Aeromonas hydrophila gr. 2	99	97	80	1	80	0	0	0	85	80	97	97	99	9	9	1	80	1	75	5	100	97	0	95	99	99	99
Aeromonas salmonicida ssp salmonicida	1	60	1	0	0	0	0	0	1	0	75	50	54	0	0	0	0	0	1	0	100	98	0	1	99	99	99
Grimontia hollisae	1	0	0	0	0	0	0	0	94	0	0	10	0	0	0	0	0	0	0	0	100	100	0	0	99	99	99
Photobacterium damselae	1	99	75	0	1	0	98	0	0	10	1	50	0	0	0	0	1	0	0	0	100	100	0	25	99	99	99
Plesiomonas shigelloides	95	99	100	100	0	0	0	0	100	0	0	99	0	99	0	0	0	0	0	0	100	99	0	95	99	99	99
Vibrio alginolyticus	0	0	98	75	60	0	1	0	100	10	75	99	100	0	1	0	100	0	10	1	100	47	0	100	99	94	94
Vibrio cholerae	98	1	94	97	75	0	0	0	99	58	92	98	98	0	0	0	94	0	5	0	100	96	0	100	96	99	99
Vibrio fluvialis	95	99	0	0	1	0	0	0	80	0	75	75	80	0	1	0	75	0	36	75	100	100	0	100	99	99	99
Vibrio mimicus	99	0	99	99	50	0	0	0	99	1	99	99	99	0	0	0	0	0	0	0	100	95	0	100	95	99	99
Vibrio parahaemolyticus	0	0	100	99	50	0	1	0	100	1	75	100	99	0	0	1	1	0	12	50	100	63	0	100	98	99	99
Vibrio vulnificus	99	0	91	90	25	0	0	0	99	1	99	99	75	0	0	0	1	0	90	0	99	54	0	100	99	99	99
Pasteurella aerogenes	99	0	0	80	0	0	99	0	0	0	0	99	0	97	0	1	99	0	0	75	75	100	0	0	100	100	100
Pasteurella multocida 1	4	0	0	25	0	0	0	0	99	0	0	29	1	0	1	0	75	0	0	0	99	90	0	0	2	23	23
Pasteurella multocida 2	7	0	0	45	0	0	0	0	99	0	0	44	99	0	99	0	99	0	0	0	89	90	0	0	2	23	23
Pasteurella pneumotropica/ Mannheimia haemolytica	60	0	1	10	0	0	25	0	15	7	3	35	12	12	12	1	35	1	2	1	80	99	0	0	9	33	33
Acinetobacter baumannii/calcoaceticus	0	0	0	0	51	0	1	0	0	5	5	99	0	0	0	0	0	99	1	99	0	3	0	0	90	98	0
*Bordetella/Alcaligenes/Moraxella spp **	0	0	0	0	52	0	14	1	0	25	1	0	0	0	0	0	0	0	0	0	95	62	1	75	75	0	0
Burkholderia cepacia	50	0	25	16	78	0	0	0	0	1	43	60	1	0	0	0	13	0	7	20	90	40	0	99	88	97	0
Chromobacterium violaceum	0	99	0	0	75	0	0	0	14	0	99	99	0	0	0	0	10	0	0	0	99	75	0	99	99	99	99
Chryseobacterium indologenes	5	0	0	0	12	0	90	0	75	0	80	0	0	0	0	0	0	0	0	0	99	20	0	0	57	90	10
Chryseobacterium meningosepticum	77	0	0	0	20	0	1	0	85	0	90	0	0	0	0	0	0	0	0	0	99	6	0	0	48	93	6
Eikenella corrodens	0	0	75	99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	95	0	1	1	49	49
Myroides /Chryseobacterium indologenes	0	0	0	0	50	0	75	0	0	1	75	0	0	0	0	0	0	0	0	0	99	0	0	0	84	2	2
Ochrobactrum anthropi	15	0	0	0	30	0	25	1	0	15	0	1	0	0	0	0	0	0	0	10	90	42	60	99	99	47	0
Pseudomonas aeruginosa	0	89	0	0	92	0	25	0	0	1	75	50	0	0	0	0	1	10	1	25	97	12	56	97	100	98	0
Pseudomonas fluorescens/putida	0	75	0	0	75	0	0	0	0	10	27	25	0	0	0	0	0	25	1	20	99	26	0	100	96	93	0
Pseudomonas luteola	86	75	0	0	94	0	0	0	0	25	13	84	0	1	0	1	1	15	1	85	0	30	0	100	91	94	0
Pseudomonas oryzihabitans	0	0	0	0	89	0	0	0	0	25	1	10	0	1	0	1	0	10	0	45	0	7	0	100	99	99	0
Non-fermenter spp	1	1	0	0	37	0	1	0	0	15	9	9	0	0	0	1	1	1	1	1	93	48	35	99	85	49	0
Shewanella putrefaciens group	0	0	0	80	75	75	1	0	0	0	75	1	0	0	0	0	1	0	0	2	99	96	0	100	96	9	0
Stenotrophomonas maltophilia	70	0	75	1	75	1	0	0	0	0	90	1	0	0	0	0	0	0	0	0	1	26	1	100	91	49	0

* *Brucella* spp possible / möglich / posible / possibile / possível / πιθανόν / möjlig / mulig / Możliwość.

TABLEAU DE LECTURE / READING TABLE / ABLESETABELLE / TABLA DE LECTURA / TABELLA DI LETTURA / QUADRO DE LEITURA / ΠΙΝΑΚΑΣ ΑΝΑΓΝΩΣΗΣ / AVLÄSNINGSTABELL / AFLÆSNINGSTABEL / TABELA ODCZYTÓW

TESTS / TEST / TESTES / ΕΞΕΤΑ ΣΕΙΣ / TESTER	COMPOSANTS ACTIFS / ACTIVE INGREDIENTS / AKTIVE BESTANDTEILE / COMPONENTES ACTIVOS / SUBSTRATI / COMPONENTES ACTIVOS / ΔΡΑΣΤΙΚΑ ΣΥΣΤΑΤΙΚΑ / AKTIVA INGREDIENSER / AKTIVE INDHOLDSSTOFFER / AKTYWNE SKŁADNIKI	QTE / QTY / MENGE / CANTIDAD / Q.TA' / QTD / ΠΟΣ. / MÄNGD / MÆNGDE / STĘŻENIE / (mg/cup. / mg/Vert. / mg/cúp / mg/κυτ. / mg/kup. / mg/brønd / mg/probówka)	REACTIONS-ENZYMES / REAKTIONE-ENZYME / REACCIONES-ENZIMAS / REAZIONI-ENZIMI / REACÇÕES-ENZIMAS / ΑΝΤΙΔΡΑΣΕΙΣ-ΕΝΖΥΜΑ / REAKTIONER-ENZYMER / REAKTIONER/ENZYMER / REAKCJE/ENZYMY	RESULTATS / RESULTS / ERGEBNISSE / RESULTADOS / RISULTATI / RESULTADOS / ΑΠΟΤΕΛΕΣΜΑΤΑ / RESULTAT / RESULTATER / WYNIKI	
				NEGATIF / NEGATIVE / NEGATIV / NEGATIVO / ΑΡΝΗΤΙΚΟ / NEGATIVT / NEGATYWNY	POSITIF / POSITIVE / POSITIV / POSITIVO / ΘΕΤΙΚΟ / POSITIVT / POZYTYWNY
ONPG	2-nitrophényl-ßD-galactopyranoside / 2-nitrophenyl-ßD-galactopyranoside / 2-Nitrophenyl-ßD-Galaktopyranosid / 2-nitro-fenil-ßD-galactopiranosida / 2-nitrofenil-ßD-galattopiranoside / 2-nitrofenil-ßD-galactopiranosida / 2-νιτροφενυλ-ßD-γαλακτοπυρανοσίδη / 2-nitrofenyl-ßD-galaktopyranosid / 2-nitrofenylo-ßD-galaktopiranozyd	0,223	ß-galactosidase (Ortho NitroPhényl-ßD-Galactopyranosidase) / ß-Galaktosidase (Ortho-Nitrophenyl-ßD-Galaktopyranosidase) / β-galactosidasa (orto-nitrofenil-βD-galactoprianosidasa) / ß-galattosidasi (Orto-NitroFenil-ßD-Galattopiranoside) / ß-galactosidase (Orto Nitrofenil-ßD-Galactopiranosidase) / ß-γαλακτοσιδάση (Ορθο ΝιτροΦενυλ-ßD-Γαλακτοπυρανοσιδάση) / ß-galaktosidas (orto-nitrofenyl-ßD-galaktopyranosidas) / ß-galaktosidase (Ortho-NitroFenyl-ßD-Galaktopyranosidase) / ß-galaktozydaza (orto nitrofenylo-ßD-galaktopiranozyd)	Incolore / colorless / farblos / incoloro / incolor / άχρωμο / färglös / farveløs / bezbarwny	jaune / yellow / gelb / amarillo / giallo / amarelo / κίτρινο / gul / żółty (1)
ADH	L-arginine / L-Arginin / L-arginina / L-αργινίνη	1,9	Arginine DiHydrolase / Arginin DiHydrolase / Arginina-dihidrolasa / Arginina Deidrolasi / Arginina DiHidrolase / Διυδρολάδη της Αργινίνης / Arginin dihydrolas / Arginin DiHydrolase / dihydrolaza argininy	Jaune / yellow / gelb / amarillo / giallo / amarelo / κίτρινο / gul / żółty	rouge - orangé / red - orange / rot - orange / rojo - anaranjado / rosso - arancio / vermelho - alaranjado / ερυθρό - πορτοκαλί / röd - orange / rød - orange / czerwony - pomarańczowy (2)
LDC	L-lysine / L-Lysin / L-lisina / L-λυσίνη / L-lizyna	1,9	Lysine DéCarboxylase / Lysine Decarboxilase / Lysin DeCarboxylase / Lisina Decarboxilasa / Lisina DeCarbossilasi / Lisina DesCarboxilase / Δεκαρβοξυλάση της Λυσίνης / Lysindekarboxylas / dekarbosylaza lizyny	Jaune / yellow / gelb / amarillo / giallo / amarelo / κίτρινο / gul / żółty	rouge - orangé / red - orange / rot - orange / rojo – anaranjado / rosso - arancio / vermelho – alaranjado / ερυθρό - πορτοκαλί / röd - orange / rød - orange / czerwony - pomarańczowy (2)
ODC	L-ornithine / L-Ornithin / L-ornitina / L-ορνιθίνη / L-ornitin / L-ornityna	1,9	Ornithine DéCarboxylase / Ornithine Decarboxilase Ornithin DeCarboxylase / Ornitina Decarboxilasa / Ornitina DeCcarbossilasi / Ornitina DesCarboxilase / Δεκαρβοξυλάση της Ορνιθίνης / Ornitin-dekarboxylas / Ornitin DeCarboxylase / dekarbosylaza ornityny	Jaune / yellow / gelb / amarillo / giallo / amarelo / κίτρινο / gul / żółty	rouge - orangé / red – orange / rot - orange / rojo – anaranjado / rosso - arancio / vermelho – alaranjado / ερυθρό - πορτοκαλί / röd - orange / rød - orange / czerwony - pomarańczowy (2)
CIT	trisodium citrate / Trinatriumcitrat / citrato trisódico / citrato trisodico / Citrato de sódio / κιτρικό τρινάτριο / trinatriumcitrat / cytrynian trisodowy	0,756	utilisation du CITrate / CITrate utilization / CITratverwertung / utilización del CITrato / utilizzazione del CITrato / Utilização do CITrato / Χρήση κιτρικού / CITratanvändning / CITratudnyttelse / wykorzystanie cytrynianu	vert pâle - jaune / pale green - yellow / hellgrün - gelb / verde pálido-amarillo / verde chiaro - giallo / verde pálido - amarelo / ανοιχτό πράσινο - κίτρινο / ljusgrön - gul / lysegrøn - gul / jasno szary - żółty	bleu-vert - bleu / blue-green – blue / blau-grün - blau / azul-verde – azul / blu-verde - blu / azul-esverdeado - azul / κυανοπράσινο - κυανό / blågrön - blå / blågrøn - blå / niebiesko-zielony - niebieski (3)
H_2S	sodium thiosulfate / Natriumthiosulfat / tiosulfato sódico / tiosolfato di sodio / Tiosulfato de sódio / θειοθειικό νάτριο / natriumtiosulfat / tiosiarczan sodowy	0,075	production d'H_2S / H_2S production / H_2S-Bildung / producción de H_2S / produzione di H_2S / Produção de H_2S / παραγωγή H_2S / H_2S-bildning / H_2S produktion / wytwarzanie H_2S	incolore - grisâtre / colorless - greyish / farblos - gräulich / incoloro - grisáceo / incolore - grigiastro / incolor - acinzentato / άχρωμο - γκριζωπό / färglös - gråaktig / farveløs - grålig / bezbarwny - szarawy	dépot noir - fin liseré / black deposit - thin line / schwarzer Niederschlag / depósito negro - fin liserado / depositio nero - orlo sottile / depósito negro - orla fina / μαύρο υπόλειμμα - λεπτή γραμμή / svart avlagring - tunn linje / sort aflejring - tynd stribe / czarny osad - rozpłynięta linia
URE	Urée / urea / Harnstoff / Ureia / ουρία / urinämne / mocznik	0,76	UREase / UREasa / UREasi / ουρεάση / UREas / ureaza	Jaune / yellow / gelb / amarillo / giallo / amarelo / κίτρινο / gul / żółty	rouge - orangé / red-orange / rot - orange / rojo - anaranjado / rosso - arancio / vermelho - alaranjado / ερυθρό - πορτοκαλί / röd - orange / rød - orange / czerwony - pomarańczowy (2)
TDA	L-tryptophane / L-Tryptophan / L-triptófano / L-triptofano / L-τρυπτοφάνη / L-tryptofan	0,38	Tryptophane DésAminase / Tryptophane DeAminase / Tryptophan DesAminase / Triptofano DesAminasa / Triptofano DeAminasi / Triptofano DesAminase / Δεαμινάση της Τρυπτοφάνης / Tryptofan-deaminas / Tryptofan DeAminase / dezaminaza tryptofanu	TDA-immédiat / TDA-immediate / TDA-sofort / TDA-immediato / TDA-imediato / TDA-άμεσο / TDA-omedelbar / TDA-umiddelbar / TDA-natychmiast Jaune / yellow / gelb / amarillo / giallo / amarelo / κίτρινο / gul / żółty	marron-rougeâtre / reddish brown / rotbraun / marrón-rojizo / marrone-rossastro / castanho - avermelhado / κοκκινωπό καφέ / rödbrun / rødbrun / czerwono-brązowy
IND	L-tryptophane / L-Tryptophan / L-triptófano / L-triptofano / L-τρυπτοφάνη / L-tryptofan	0,19	production d'INDole / INDole production / INDol-Bildung / producción de ÍNDole / produzione di INDolo / Produção de INDol / Παραγωγή ινδόλης / INDol-bildning / INDol produktion / wytwarzanie indolu	JAMES-immédiat / JAMES-immediate / JAMES-immediato / JAMES-imediato / JAMES- άμεσο / JAMES-omedelbar / JAMES-umiddelbar / JAMES-natychmiast Incolore-vert pâle-jaune / colorless - pale green-yellow / farblos - hellgrün-gelb / incoloro - verde pálido-amarillo / incolore - verde chiaro-giallo / incolor - verde pálido-amarelo / άχρωμο - ανοιχτό πράσινο-κίτρινο / färglös - ljusgrön-gul / farveløs - lysegrøn-gul / bezbarwny - jasno zielony-żółty	rose / pink / rosa / ρόδινο / lyserød / różowy

TESTS / TEST / TESTES / ΕΞΕΤΑ ΣΕΙΣ / TESTER	COMPOSANTS ACTIFS / ACTIVE INGREDIENTS / AKTIVE BESTANDTEILE / COMPONENTES ACTIVOS / SUBSTRATI / COMPONENTES ACTIVOS / ΔΡΑΣΤΙΚΑ ΣΥΣΤΑΤΙΚΑ / AKTIVA INGREDIENSER / AKTIVE INDHOLDSSTOFFER / AKTYWNE SKŁADNIKI	QTE / QTY / MENGE / CANTIDAD / Q.TA' / QTD / ΠΟΣ. / MÄNGD / MÆNGDE / STĘŻENIE / (mg/cup. / mg/Vert. / mg/cúp / mg/κυπ. / mg/kup. / mg/brønd / mg/probówka)	REACTIONS-ENZYMES / REAKTIONE-ENZYME / REACCIONES-ENZIMAS / REAZIONI-ENZIMI / REACÇÕES-ENZIMAS / ΑΝΤΙΔΡΑΣΕΙΣ-ΕΝΖΥΜΑ / REAKTIONER-ENZYMER / REAKTIONER/ENZYMER / REAKCJE/ENZYMY	RESULTATS / RESULTS / ERGEBNISSE / RESULTADOS / RISULTATI / RESULTADOS / ΑΠΟΤΕΛΕΣΜΑΤΑ / RESULTAT / RESULTATER / WYNIKI	
				NEGATIF / NEGATIVE / NEGATIV / NEGATIVO / ΑΡΝΗΤΙΚΟ / NEGATIVT / NEGATYWNY	POSITIF / POSITIVE / POSITIV / POSITIVO / ΘΕΤΙΚΟ / POSITIVT / POZYTYWNY
				VP 1 + VP 2 / 10 min / VP 1 + VP 2 / 10 λεπτά	
VP	sodium pyruvate / Natriumpyruvat / piruvato sódico / piruvato di sodio / Piruvato de sódio / πυρουβικό νάτριο / natriumpyruvat / pirogronian sodu	1,9	production d'acétoïne / acetoin production / Acetoinbildung / producción de acetoína / produzione di acetoina / Produção de acetoína / παραγωγή ακετοΐνης / acetoinbildning / acetoindannelse / wytwarzanie acetoiny (Voges Proskauer)	incolore - rose pâle / colorless - pale pink / farblos - blassrosa / Incoloro / rosa pálido / incolore - rosa chiaro / Incolor / rosa - pálido / Άχρωμο / ανοιχτό ρόδινο / färglös - ljusrosa / farveløs - bleg lyserød / Bezbarwny - blado różowy	rose - rouge / pink - red / rosa - rot / rosa - rojo / rosa - rosso / rosa - vermelho / ρόδινο - ερυθρό / rosa - röd / lyserød - rød / różowy - czerwony (5)
GEL	Gélatine (origine bovine) / Gelatin (bovine origin) Gelatine (bovinen Ursprungs) / Gelatina (origen bovino) / gelatina (origine bovina) / Gelatina (origem bovina) / Ζελατίνη (βοείου προέλευσης) / Gelatin (av nöt) / Gelatine (okse-oprindelse) / żelatyna (wołowa)	0,6	Gélatinase (GELatine) / GELatinase / Gelatinase (GELatine) / Gelatinasa (GELatina) / GELatinasi / Ζελατινάση / GELatinas / GELatinase / żelatynaza	non diffusion / no diffusion / keine diffusion / no difusión / nessuna diffusione / não difusão / μη διάχυση / ingen spridning / ingen diffusion / brak dyfuzji	diffusion du pigment noir / diffusion of black pigment / Diffusion der schwarzen Tusche / difusión pigmento negro / diffusione del pigmento nero / difusão do pigmento negro / διάχυση μελανής χρωστικής / spridning av svart pigment / diffusion af sort pigment / dyfuzja czarnego pigmentu
GLU	D-glucose / D-Glukose / D-glucosa / D-glucosio / D-γλυκόζη / D-glukos / D-glukoza	1,9	fermentation - oxydation (GLUcose) / fermentation - oxidation (GLUcose) / Fermentation - Oxidation (GLUkose) / fermentación-oxidación (GLUcosa) / fermentazione - ossidazione (GLUcosio) / fermentação - oxidação (GLUcose) / ζύμωση - οξείδωση (μανιτόλης) / jäsning - oxidation (GLUkos) / fermentacja - utlenianie (glukoza) (4)	bleu - bleu-vert / blue - blue green / blau - blau-grün / azul - azul verdoso / blu - blu-verde / azul - azul-esverdeado / κυανό - κυανοπράσινο / blå - blågrön / blå - blågrøn / niebieski - niebiesko-zielony	jaune - jaune gris / yellow - greyish yellow / gelb - gelb grau / amarillo/amarillo grisáceo / giallo - giallo grigio / amarelo - amarelo acinzentado / κίτρινο - γκριζωπό κίτρινο / gul - grågul / gul - grågul / żółty - szaro-żółty
MAN	D-mannitol / D-Mannit / D-manitol / D-mannitolo / D-μανιτόλη	1,9	fermentation - oxydation (MANnitol) / fermentation - oxidation (MANnitol) / Fermentation - Oxidation (MANnit) / fermentación-oxidación (MANitol) / fermentazione - ossidazione (MANnitolo) / fermentação - oxidação (MANitol) / ζύμωση - οξείδωση (μανιτόλης) / jäsning - oxidation (MANnitol) / fermentacja - utlenianie (mannitol) (4)	bleu - bleu-vert / blue - blue green / blau - blau-grün / azul - azul verdoso / blu - blu-verde / azul-esverdeado / κυανό - κυανοπράσινο / blå - blågrön / blå - blågrøn / niebieski - niebiesko-zielony	jaune / yellow / gelb / amarillo / giallo / κίτρινο / gul / żółty
INO	Inositol / Inosit / inositolo / ινοσιτόλη / inozytol	1,9	fermentation - oxydation (INOsitol) / fermentation - oxidation (INOsitol) Fermentation - Oxidation (INOsit) / fermentación-oxidación (INOsitol) / fermentazione - ossidazione (INOsitolo) / fermentação - oxidação (INOsitol) / ζύμωση - οξείδωση (ινοσιτόλης) / jäsning - oxidation (INOsitol) / fermentacja - utlenianie (inozytol) (4)	bleu - bleu-vert / blue - blue green / blau - blau-grün / azul - azul verdoso / blu - blu-verde / azul-esverdeado / κυανό - κυανοπράσινο / blå - blågrön / blå - blågrøn / niebieski - niebiesko-zielony	jaune / yellow / gelb / amarillo / giallo / κίτρινο / gul / żółty
SOR	D-sorbitol / D-Sorbit / D-sorbitolo / D-σορβιτόλη	1,9	fermentation - oxydation (SORbitol) / fermentation - oxidation (SORbitol) / Fermentation - Oxidation (SORbit) / fermentación-oxidación (SORbitol) / fermentazione - ossidazione (SORbitolo) / fermentação - oxidação (SORbitol) / ζύμωση - οξείδωση (σορβιτόλης) / jäsning - oxidation (SORbitol) / fermentacja - utlenianie (sorbitol) (4)	bleu - bleu-vert / blue - blue green / blau - blau-grün / azul - azul verdoso / blu - blu-verde / azul-esverdeado / κυανό - κυανοπράσινο / blå - blågrön / blå - blågrøn / niebieski - niebiesko-zielony	jaune / yellow / gelb / amarillo / giallo / κίτρινο / gul / żółty
RHA	L-rhamnose / L-Rhamnose / L-ramnosa / L-ramnosio / L-ramnose / L-ραμνόζη / L-ramnos / L-ramnoza	1,9	fermentation - oxydation (RHAmnose) / fermentation - oxidation (RHAmnose) / Fermentation - Oxidation (RHAmnose) / fermentación-oxidación (RHAmnosa) / fermentazione - ossidazione (Ramnosio) / fermentação - oxidação (RAmnose) / ζύμωση - οξείδωση (ραμνόζης) / jäsning - oxidation (RHAmnos) / fermentacja - utlenianie (ramnoza) (4)	bleu - bleu-vert / blue - blue green / blau - blau-grün / azul - azul verdoso / blu - blu-verde / azul-esverdeado / κυανό - κυανοπράσινο / blå - blågrön / blå - blågrøn / niebieski - niebiesko-zielony	jaune / yellow / gelb / amarillo / giallo / κίτρινο / gul / żółty
SAC	D-saccharose / D-Saccharose / D-sucrose / D-sacarosa / D-saccarosio / D-sacarose / D-σουκρόζη / D-sukros / D-sucrose / D-sacharoza	1,9	fermentation - oxydation (SACcharose) / fermentation - oxidation (SACharose) / Fermentation - Oxidation (SACcharose) / fermentación-oxidación (SACarosa) / fermentazione - ossidazione (SACcarosio) / fermentação - oxidação (SACarose) / ζύμωση - οξείδωση (σακχαρόζης) / jäsning - oxidation (SACkaros) / fermentacja - utlenianie (sacharoza) (4)	bleu - bleu-vert / blue - blue green / blau - blau-grün / azul - azul verdoso / blu - blu-verde / azul-esverdeado / κυανό - κυανοπράσινο / blå - blågrön / blå - blågrøn / niebieski - niebiesko-zielony	jaune / yellow / gelb / amarillo / giallo / κίτρινο / gul / żółty

TESTS / TEST / TESTES / ΕΞΕΤΑ ΣΕΙΣ / TESTER	COMPOSANTS ACTIFS / ACTIVE INGREDIENTS / AKTIVE BESTANDTEILE / COMPONENTES ACTIVOS / SUBSTRATI / COMPONENTES ACTIVOS / ΔΡΑΣΤΙΚΑ ΣΥΣΤΑΤΙΚΑ / AKTIVA INGREDIENSER / AKTIVE INDHOLDSSTOFFER / AKTYWNE SKŁADNIKI	QTE / QTY / MENGE / CANTIDAD / Q.TA' / QTD / ΠΟΣ. / MÄNGD / MÆNGDE / STĘŻENIE / (mg/cup. / mg/Vert. / mg/cúp / mg/κυπ. / mg/kup. / mg/brønd / mg/probówka)	REACTIONS-ENZYMES / REAKTIONE-ENZYME / REACCIONES-ENZIMAS / REAZIONI-ENZIMI / REACÇÕES-ENZIMAS / ΑΝΤΙΔΡΑΣΕΙΣ-ΕΝΖΥΜΑ / REAKTIONER-ENZYMER / REAKTIONER/ENZYMER / REAKCJE/ENZYMY	RESULTATS / RESULTS / ERGEBNISSE / RESULTADOS / RISULTATI / RESULTADOS / ΑΠΟΤΕΛΕΣΜΑΤΑ / RESULTAT / RESULTATER / WYNIKI	
				NEGATIF / NEGATIVE / NEGATIV / NEGATIVO / ΑΡΝΗΤΙΚΟ / NEGATIVT / NEGATYWNY	POSITIF / POSITIVE / POSITIV / POSITIVO / ΘΕΤΙΚΟ / POSITIVT / POZYTYWNY
MEL	D-melibiose / D-Melibiose / D-melibiosa / D-melibioso / D-μελιβιόζη / D-melibios / D-melibioza	1,9	fermentation - oxydation (MELibiose) / fermentation - oxidation (MELibiose) / fermentación-oxidación (MELibiosa) / fermentazione - ossidazione (MELibiosio) / fermentação - oxidação (MELibiose) / ζύμωση - οξείδωση (μελιβιόζης) / jäsning - oxidation (MELibios) / fermentacja - utlenianie (melibioza) (4)	bleu - bleu-vert / blue - blue green / blau - blau-grün / azul - azul verdoso / blu - blu-verde / azul-esverdeado / κυανό - κυανοπράσινο / blå - blågrön / blå - blågrøn / niebieski - niebiesko-zielony	jaune / yellow / gelb / amarillo / giallo / κίτρινο / gul / żółty
SAC	D-saccharose / D-sucrose / D-sacarosa / D-saccarosio / D-sacarose / D-σουκρόζη / D-sukros / D-sucrose / D-sacharoza	1,9	fermentation - oxydation (SACcharose) / fermentation - oxidation (SACharose) / fermentación-oxidación (SACarosa) / fermentazione - ossidazione (SACcarosio) / fermentação - oxidação (SACarose) / ζύμωση - οξείδωση (σακχαρόζης) / jäsning - oxidation (SACkaros) / fermentacja - utlenianie (sacharoza) (4)	bleu - bleu-vert / blue - blue green / blau - blau-grün / azul - azul verdoso / blu - blu-verde / azul-esverdeado / κυανό - κυανοπράσινο / blå - blågrön / blå - blågrøn / niebieski - niebiesko-zielony	jaune / yellow / gelb / amarillo / giallo / κίτρινο / gul / żółty
MEL	D-melibiose / D-melibiosa / D-melibioso / D-μελιβιόζη / D-melibios / D-melibioza	1,9	fermentation - oxydation (MELibiose) / fermentation - oxidation (MELibiose) / fermentación-oxidación (MELibiosa) / fermentazione - ossidazione (MELibiosio) / fermentação - oxidação (MELibiose) / ζύμωση - οξείδωση (μελιβιόζης) / jäsning - oxidation (MELibios) / fermentacja - utlenianie (melibioza) (4)	bleu - bleu-vert / blue - blue green / blau - blau-grün / azul - azul verdoso / blu - blu-verde / azul-esverdeado / κυανό - κυανοπράσινο / blå - blågrön / blå - blågrøn / niebieski - niebiesko-zielony	jaune / yellow / gelb / amarillo / giallo / κίτρινο / gul / żółty
AMY	Amygdaline / Amygdalin / amigdalina / αμυγδαλίνη / amygdalin /	0,57	fermentation - oxydation (AMYgdaline) / Fermentation - Oxidation (AMYgdalin) / fermentación-oxidación (AMYgdalina) / fermentazione - ossidazione (AMigdalina) / Fermentação - oxidação (AMIgdalina) / ζύμωση - οξείδωση (αμυγδαλίνης) jäsning / oxidation (AMYgdalin) / fermentacja / utlenianie (amigdalina) (4)	bleu - bleu-vert / blue - blue green / blau - blau-grün / azul - azul verdoso / blu - blu-verde / azul-esverdeado / κυανό - κυανοπράσινο / blå - blågrön / blå - blågrøn / niebieski - niebiesko-zielony	jaune / yellow / gelb / amarillo / giallo / κίτρινο / gul / żółty
ARA	L-arabinose / L-arabinosa / L-arabinosio / L-αραβινόζη / L-arabinos / L-arabinoza	1,9	fermentation - oxydation (ARAbinose) / fermentaion - oxidation (ARAbinose / fermentación-oxidación (ARAbinosa) / fermentazione - ossidazione (ARAbinosio) / fermentação - oxidação (ARAbinose) / ζύμωση οξείδωση (αραβινόζης) / jäsning - oxidation (ARAbinos) / fermentacja - utlenianie (arabinoza) (4)	bleu - bleu-vert / blue - blue green / blau - blau-grün / azul - azul verdoso / blu - blu-verde / azul-esverdeado / κυανό - κυανοπράσινο / blå - blågrön / blå - blågrøn / niebieski - niebiesko-zielony	jaune / yellow / gelb / amarillo / giallo / κίτρινο / gul / żółty
OX	(voir notice du test oxydase) / (see oxidase test package insert) / (siehe Arbeitsanleitung des Oxidase-Tests) / (ver ficha técnica del test de oxidasa) / (vedere scheda tecnica del test ossidasi) / (consultar o folheto informativo do teste oxidase) / (δείτε εσώκλειστο οδηγιών της εξέτασης οξειδάσης) / (se bipacksedel för oxidastest) / (se indlægsseddel for oxidase-test) / (przeczytać instrukcję do testu oksydazy)		cytochrome-Oxydase / Cytochrom OXidase / citocromo-OXidasa / citocromo-Ossidasi / Citocromo-Oxidase / οξειδάση του κυτοχρώματος / cytokrom-Oxidas / cytochrom-Oxidase / oksydaza cytochromowa	(voir notice du test oxydase) / (see oxidase test package insert) / (siehe Arbeitsanleitung des Oxidase-Tests) / (ver ficha técnica del test de oxidasa) / (vedere scheda tecnica del test ossidasi) / (consultar o folheto informativo do teste oxidase) / (δείτε εσώκλειστο οδηγιών της εξέτασης οξειδάσης) / (se bipacksedel för oxidastest) / (se indlægsseddel for oxidase-test) / (przeczytać instrukcję do testu oksydazy)	

(1) Une très légère couleur jaune est également positive / A very pale yellow should also be considered positive / Auch eine nur ganz leichte Gelbfärbung ist als positiv zu bewerten / Un color amarillo muy ligero también implica resultado positivo / Una leggerissima colorazione gialla è comunque positiva / Uma cor amarela muito ligeira é também positiva. / Ένα πολύ ανοιχτόχρωμο κίτρινο θα πρέπει επίσης να θεωρείται θετικό / En mycket ljust gul färgning ska också anses som positiv / En meget lys gul skal også betragtes som positiv / Nawet bardzo blady żółty kolor należy rozpatrywać jako pozytywny.

(2) Une couleur orange apparaissant après 36-48 H d'incubation doit être considérée négative / An orange color after 36-48 hours incubation must be considered negative / Eine orange Verfärbung nach einer 36-48-stündigen Inkubation wird als negativ bewertet / La aparición de un color naranja tras 36-48 H de incubación debe considerarse negativa / Se dopo 36-48 ore di incubazione appare una colorazione arancione, la reazione deve essere considerata negativa / Uma cor laranja após 36-48 H de incubação deve ser considerada negativa. / Ένα πορτοκαλί χρώμα μετά από 36-48 ώρες επώασης πρέπει να θεωρείται αρνητικό / En orange färg efter 36-48 timmars inkubation ska anses negativ / En orange farve efter 36-48 timers inkubation skal betragtes som negativ / Pomarańczowy kolor po 36-48 godzinach inkubacji należy uważać za negatywny.

(3) Lecture dans la cupule (zone aérobie) / Reading made in the cupule (aerobic) / Ablesung im Becher (aerober Bereich) / Lectura en la cúpula (zona aerobia) / Lettura nella cupola (zona aerobia) / Leitura na cúpula (zona aeróbia). / Η ανάγνωση έγινε στο κυπέλιο (αερόβια) / Avläsning utförd i kupolen (aerob) / Aflæsning foretaget i brønden (aerob) / Odczytu dokonać we wgłębieniu (warunki tlenowe).

(4) La fermentation commence dans la partie inférieure des tubes, l'oxydation commence dans la cupule / Fermentation begins in the lower portion of the tubes, oxidation begins in the cupule / Die Fermentation beginnt im unteren Teil der Röhrchens, die Oxidation im Becher / La fermentación comienza en la parte inferior de los tubos, mientras que la oxidación empieza en la cúpula / La fermentazione comincia nella parte inferiore delle microprovette, mentre l'ossidazione comincia nella cupola / A fermentação começa na parte inferior dos tubos, a oxidação começa na cúpula. / Η ζύμωση ξεκινάει στο κατώτερο τμήμα των σωλήνων, η οξείδωση αρχίζει στο κυπέλιο / Jäsning börjar i brunnens nedre delar, oxidation börjar i kupolen / Fermentation starter i den nederste del af rørene, oxidation starter i brønden / Fermentacja zachodzi w najniższej części probówki, utlenianie we wgłębieniu.

(5) Une légère coloration rose apparaissant après 10 minutes doit être lue négative / A slightly pink color after 10 minutes should be considered negative / Eine nach 10 min auftretende schwache rosa Verfärbung wird als negativ bewertet / Una ligera coloración rosa, que aparece tras 10 minutos, debe ser leída como negativa / Una debole colorazione rosa che appaia dopo oltre 10 minuti deve essere considerata negativa / Uma ligeira coloração rosa depois de 10 minutos deve ser considerada negativa. / Ένα ελαφρώς ρόδινο χρώμα μετά από 10 λεπτά θα πρέπει να θεωρείται αρνητικό / En svagt rosa färg efter 10 minuter ska anses negativ / En let lyserød farve efter 10 minutter skal betragtes som negativ / Słabo różowy kolor po 10 minutach należy uważać za negatywny.

- Les quantités indiquées peuvent être ajustées en fonction des titres des matières premières / The quantities indicated may be adjusted depending on the titer of the raw materials used / Die angegebenen Mengen können je nach Konzentration der verwendeten Ausgangsmaterialien angeglichen werden. / Las cantidades indicadas pueden ser ajustadas en función de los títulos de las materias primas / Le quantità indicate possono essere aggiustate in funzione dei titoli delle materie prime / As quantidades indicadas podem ser ajustadas em função dos títulos das matérias-primas./ Οι αναγραφόμενες ποσότητες μπορούν να ρυθμίζονται ανάλογα με τον τίτλο των πρώτων υλών που χρησιμοποιούνται / Den angivna mängden kan justeras beroende på titern av de använda råmaterialen / De angivne mængder kan justeres, afhængigt af titeren for de anvendte råmaterialer / Wskazane stężenia mogą być regulowane w zależności od miana użytego surowego materiału.
- Certaines cupules contiennent des composants d'origine animale, notamment des peptones / Certain cupules contain products of animal origin, notably peptones / Einige Näpfchen enthalten Bestandteile tierischen Ursprungs, vor allem Peptone / Ciertas cúpulas contienen componentes de origen animal, en concreto peptonas / Alcune cupole contengono dei componenti di origine animale, in particolare dei peptoni / Algumas cúpulas contêm componentes de origem animal, nomeadamente, peptonas. / Ορισμένα κυπέλια περιέχουν προϊόντα ζωικής προέλευσης, ειδικά πεπτόνες / Vissa kupoler innehåller produkter av animaliskt ursprung, i synnerhet peptoner / Visse brønde indeholder produkter af animalsk oprindelse, specielt peptoner / Niektóre mikroprobówki zawierają produkty pochodzenia zwierzęcego,zwłaszcza peptony.

TESTS COMPLEMENTAIRES / SUPPLEMENTARY TESTS / ZUSATZREAKTIONEN / PRUEBAS COMPLEMENTARIAS / TEST COMPLEMENTARI / TESTES COMPLEMENTARES / ΣΥΜΠΛΗΡΩΜΑΤΙΚΕΣ ΕΞΕΤΑΣΕΙΣΒ / KOMPLETTERANDE TESTER / SUPPLERENDE TESTS / TESTY UZUPEŁNIAJĄCE

TESTS / TEST / TESTES / ΕΞΕΤΑ ΣΕΙΣ / TESTER	COMPOSANTS ACTIFS / ACTIVE INGREDIENTS / AKTIVE BESTANDTEILE / COMPONENTES ACTIVOS / SUBSTRATI / COMPONENTES ACTIVOS / ΔΡΑΣΤΙΚΑ ΣΥΣΤΑΤΙΚΑ / AKTIVA INGREDIENSER / AKTIVE INDHOLDSSTOFFER / AKTYWNE SKŁADNIKI	QTE / QTY / MENGE / CANTIDAD / Q.TA' / QTD / ΠΟΣ. / MÆNGD / STĘŻENIE / (mg/cup. / mg/Vert. / mg/cúp / mg/κυπ. / mg/kup. / mg/brønd / mg/probówka)	REACTIONS-ENZYMES / REAKTIONE-ENZYME / REACCIONES-ENZIMAS / REAZIONI-ENZIMI / REACÇÕES-ENZIMAS / ΑΝΤΙΔΡΑΣΕΙΣ-ΕΝΖΥΜΑ / REAKTIONER-ENZYMER / REAKTIONER/ENZYMER / REAKCJE/ENZYMY	RESULTATS / RESULTS / ERGEBNISSE / RESULTADOS / RISULTATI / RESULTADOS / ΑΠΟΤΕΛΕΣΜΑΤΑ / RESULTAT / RESULTATER / WYNIKI	
				NEGATIF / NEGATIVE / NEGATIV / NEGATIVO / ΑΡΝΗΤΙΚΟ / NEGATIVT / NEGATYWNY	POSITIF / POSITIVE / POSITIV / POSITIVO / ΘΕΤΙΚΟ / POSITIVT / POZYTYWNY
Réduction des nitrates tube GLU / Nitrate reduction GLU tube / Nitrat-reduktion GLU Röhrchen / Reducción de nitratos tubo GLU / Riduzione dei nitrati provetta GLU / Redução dos nitratos tubo GLU / Αναγωγή νιτρικών Μικρο-σωλήνας GLU / Nitratreduktion GLU-brunn / Nitrat-reduktion GLU-rør / Redukcja azotanów probówka GLU	potassium nitrate / Kaliumnitrat / nitrato potásico / nitrato di potassio / nitrato de potássio / νιτρικό κάλιο / kaliumnitrat / azotan potasu	0,076	production de NO2 / NO2 production / NO2 Bildung / producción de NO_2 / produzione di NO2 / produção de NO2 / Παραγωγή NO2 / NO2-bildning / NO2 produktion / wytwarzanie NO2	NIT 1 + NIT 2 / 2-5 min	
				jaune / yellow / gelb / amarillo / giallo / amarelo / κίτρινο / gul / żółty	rouge / red / rot / rojo / rosso / vermelho / ερυθρό / röd / rød / czerwony
				Zn / 5 min	
			réduction au stade N2 / reduction to N2 gas / Reduktion zu N2 / reducción al estado N_2 / riduzione allo stadio N2 / redução ao estado N2 / αναγωγή σε αέριο N2 / reduktion till N2 gas / reduktion til N2 gas / redukcja do gazowego N2	orange-rouge / orange-red / orange-rot / naranja-rojo / arancione-rosso / laranja-vermelho / πορτοκαλί-ερυθρό / orange-röd / orange-rød / pomarańczowo-czerwony	jaune / yellow / gelb / amarillo / giallo / amarelo / κίτρινο / gul / żółty
MOB	API M Medium ou microscope / API M Medium or microscope / API M Medium oder Mikroskop / API M Medium o microscopio / API M Medium o microscopio / API M Medium ou microscópio / API M Medium ή μικροσκόπιο / API M Medium eller mikroskop / API M Medium lub badanie mikroskopowe		Mobilité / motility / Beweglichkeit / movilidad / MOBilità / mobilidade / κινητικότητα / motilitet / ruchliwość	immobile / non-motile / unbeweglich / inmóvil / MOBilità / imóvel / μη κινητικό / icke-motil / ikke-motil / brak ruchu	mobile / motile / beweglich / móvil / mobile / móvel / κινητικό / motil / ruch
McC	milieu de MacConkey / MacConkey medium / MacConkey Agar / Medio de MacConkey / Terreno di MacConkey / Meio de MacConkey / Υλικό MacConkey / podłoże MacConkey		Culture / growth / Wachstum auf McConkey Agar / cultivo / coltura / cultura / ανάπτυξη / tillväxt / vækst / wzrost	Absence / kein Wachstum / ausencia / coltura / ausência / απουσία / frånvaro / findes ikke / brak	Présence / Presence / Wachstum / presencia / presenza / presença / παρουσία / närvaro / findes / obecność
OF-F	glucose (API OF Medium) / glukose (API OF Medium) / glucosio (API OF Medium) / γλυκόζη (API OF Medium) / glukos (API OF Medium) / glukoza (API OF Medium)		fermentation : sous huile / fermentation : under mineral oil / Fermentation: unter Öl / fermentación: bajo aceite / fermentazione : sotto olio / fermentação: em óleo / ζύμωση : σε παραφινέλαιο / jäsning : under mineralolja / fermentation : under mineralsk olie / fermentacja : pod olejem mineralnym	vert / green / grün / verde / πράσινο / grön / grøn / zielony	jaune / yellow / gelb / amarillo / giallo / amarelo / κίτρινο / gul / żółty
OF-O			oxydation : à l'air / oxidation : exposed to the air / Oxidation: aerob / oxidación: al aire / ossidazione : all'aria / oxidação: no ar / οξείδωση : έκθεση στον αέρα / oxidation : exponerad för luft / oxidation : udsat for luft / utlenianie : ekspozycja na powietrze	vert / green / grün / verde / πράσινο / grön / grøn / zielony	jaune / yellow / gelb / amarillo / giallo / amarelo / κίτρινο / gul / żółty

BIBLIOGRAPHIE / LITERATURE REFERENCES / LITERATUR / BIBLIOGRAFIA / ΑΝΑΦΟΡΕΣ ΑΡΘΡΟΓΡΑΦΙΩΝ / REFERENSLITTERATUR / LITTERATURHENVISNINGER / PISMIENNICTWO

1. APPELBAUM P.C., STAVITZ J., BENTZ M.S., VON KUSTER L.C.
   Four Methods for Identification of Gram-Negative Nonfermenting Rods : Organisms more Commonly Encountered in Clinical Specimens.
   (1980) J. Clin. Microbiol. 12, 271-278.
2. BROOKS K.A., JENS M., SODEMAN T.M.
   A Clinical Evaluation of the API Microtube System for Identification of *Enterobacteriaceae*.
   (1974) Am. J. Med. Techn. 40, 55-61.
3. CASTILLO C.B., BRUCKNER D.A.
   Comparative Evaluation of the Eiken and API 20E Systems and Conventional Methods for Identification of Members of the family *Enterobacteriaceae*.
   (1984) J. Clin. Microbiol. 20, 754-757.
4. HAYEK L., WILLIS G.W.
   Identification of the *Enterobacteriaceae* : a Comparison of the Enterotube II with the API 20E.
   (1984) J. Clin. Pathol. 37, 344-347.
5. McLAUGHLIN J.K., ZUCKERMAN B.D., TENENBAUM S., WOLF B.A.
   Comparison of the API 20E, Flow, and Minitek systems for the identification of enteric and nonfermentative bacteria isolated from cosmetic raw materials.
   (1984) J. Soc. Cosmet. Chem. 35, 253-263.
6. MURRAY P.R., BARON E.J., JORGENSEN J.H., PFALLER M.A., YOLKEN R.H.
   Manual of Clinical Microbiology.
   8th Edition.
   (2003) American Society for Microbiology, Washington, D.C.
7. NEUBAUER H., SAUER T., BECKER H., ALEKSIC S., MEYER H.
   Comparison of systems for identification and differentiation of species within the genus *Yersinia*.
   (1998) J. Clin. Microbiol. 36, 11, 3366-3368.
8. NORD C.E., LINDBERG A.A., DAHLBÄCK A.
   Evaluation of Five Test-Kits, API, AuxoTab, Enterotube, PathoTec and R/B, for Identification of *Enterobacteriaceae*.
   (1974) Med. Microbiol. Immunol. 159, 211-220.
9. SMITH P.B., TOMFOHRDE K.M., RHODEN D.L., BALOWS A.
   API System : A multitube Micromethod for Identification of *Enterobacteriaceae*.
   (1972) Applied Microbiol. 24, 449-452.
10. SWANSON E.C., COLLINS M.T.
    Use of the API 20E System to Identify Veterinary *Enterobacteriaceae*.
    (1980) J. Clin. Microbiol. 12, 10-14.
11. Clinical and Laboratory Standards Institute, M50-A, Quality Control for Commercial Microbial Identification Systems; Approved Guideline, Vol. 28 N° 23.

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Symbole / Symbol Símbolo / Simbolo Σύμβολο	Signification / Meaning / Bedeutung Significado / Significato / Επεξήγηση Betydelse / Betydning / Znaczenie
REF	Référence du catalogue Catalogue number (GB) / Catalog number (US) Bestellnummer / Número de catálogo / Numero di catalogo Referência de catálogo / Αριθμός καταλόγου Katalognummer / Katalognummer / Numer katalogowy
IVD	Dispositif médical de diagnostic in vitro In Vitro Diagnostic Medical Device / In Vitro Diagnostikum Producto sanitario para diagnóstico in vitro Dispositivo medico-diagnostico in vitro Dispositivo médico para diagnóstico in vitro In Vitro Διαγνωστικό Ιατροτεχνολογικό προϊόν Medicintekniska produkter för in vitro diagnostik Medicinsk udstyr til in vitro-diagnostik Wyrób do diagnostyki In Vitro
	Fabricant / Manufacturer / Hersteller / Fabricante Fabbricante / Κατασκευαστής / Tillverkare / Producent
	Limites de température / Temperature limitation Temperaturbegrenzung / Limite de temperatura Limiti di temperatura / Limites de temperatura Περιορισμοί θερμοκρασίας / Temperaturbegränsning Temperaturbegrænsning Przestrzegać zakresu temperatury
	Utiliser jusque / Use by / Verwendbar bis Fecha de caducidad / Utilizzare entro / Prazo de validade Ημερομηνία λήξης / Använd före / Holdbar til / Użyć przed
LOT	Code du lot / Batch code Chargenbezeichnung / Código de lote Codice del lotto / Código do lote Αριθμός Παρτίδας / Lot nummer / Lotnummer / Kod partii
	Consulter les instructions d'utilisation Consult Instructions for Use Gebrauchsanweisung beachten Consulte las instrucciones de uso Consultare le istruzioni per l'uso Consulte as instruções de utilização Συμβουλευτείτε τις οδηγίες χρήσης Se handhavandebeskrivningen / Se brugsanvisning Sprawdź w instrukcji obsługi
	Contenu suffisant pour "n" tests Contains sufficient for <n> tests Inhalt ausreichend für <n> Prüfungen Contenido suficiente para <n> ensayos Contenuto sufficiente per "n" saggi Conteúdo suficiente para “n” ensaios Περιεχόμενο επαρκές για «ν» εξετάσεις Räcker till "n" antal tester Indeholder tilstrækkeligt til "n" test Wystarczy na wykonanie <n> testów

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