BIOMÉRIEUX

REF **32600**

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RAPID ID 32 STREP

IVD

System for the identification of *Streptococcaceae* and related organisms in 4 hours

SUMMARY AND EXPLANATION

RAPID ID 32 STREP is a standardized system for the identification of streptococci and enterococci, and those most common related organisms, in 4 hours, which uses 32 miniaturized enzymatic tests, as well as a specific 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.
Reading and interpretation are carried out automatically or manually.

PRINCIPLE

The RAPID ID 32 STREP strip consists of 32 test cupules which contain dehydrated test substrates.
After 4 hours of incubation, the reactions are read either using the ATB ™ Expression ™ or ***mini API*** ® instruments, or visually.
Identification is obtained using the identification software.

CONTENT OF THE KIT (Kit for 25 tests)

- 25 RAPID ID 32 STREP strips
- 25 incubation lids
- 1 package insert provided in the kit or downloadable from www.biomerieux.com/techlib

COMPOSITION OF THE STRIP

The composition of the RAPID ID 32 STREP strip is given in the Reading Table of this package insert.

REAGENTS AND MATERIAL REQUIRED BUT NOT PROVIDED

Reagents / Instrumentation

- API Suspension Medium, 2 ml (Ref. 70 700) or 3 ml (Ref. 70 640) if the ATB Inoculator is used
- Reagents : FB (Ref. 70 562)
  NIN (Ref. 70 491)
  VP A + VP B (Ref. 70 572)
- Columbia agar + 5 % sheep blood (Réf. 43 041 / 43 049)
- ATB Electronic Pipette (consult bioMérieux) or ATB Inoculator and Tips (Ref. 15 710)
- DENSIMAT (Ref. 99 234) or ATB Densitometer or McFarland Standard (Ref. 70 900)
- ATB Expression or ***mini API*** or **api*web*** ™ identification software (Ref. 40 011) (consult bioMérieux)

Material

- Swabs
- Ampule rack
- Ampule protector
- General microbiology laboratory equipment

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 should be stored at 2-8°C until the expiry date indicated on the packaging.
Ensure that the complete device identifier information on the package is marked on the storage container: item number (01), batch number (10) and expiry date (17).

SPECIMENS (COLLECTION AND PREPARATION)

RAPID ID 32 STREP is not for use directly with clinical or other specimens.
The microorganisms to be identified must first be isolated on a suitable culture medium according to standard microbiological techniques.

INSTRUCTIONS FOR USE

Selection of the colonies

Check that the strain under examination belongs to the *Streptococcaceae* family (Gram stain, catalase).

- Record the type of hemolysis and the pigmentation produced (use these as supplementary tests).
- Pick up a well-isolated colony and make a subculture on Columbia sheep blood agar (with or without Colistin / Nalidixic acid).
- Incubate for 18-24 hours at 37°C in aerobic or anaerobic conditions depending on the optimal growth conditions of the organism.

NOTE :

- For species belonging to the genus *Enterococcus*, it is recommended to incubate the agars used for subculture in aerobic conditions.
- The beta-hemolytic streptococci and enterococci colonies are sufficiently large after 24 hours of incubation. In the case of other streptococci, it is preferable to use colonies which have been incubated for 48 hours in anaerobic conditions.

Preparation of the strip

- Remove the strip from its packaging just before use.
- Discard the desiccant.
- Place the lid on the strip.
- Record the strain reference on the elongated flap of the strip. (Do not record the reference on the lid as it may be misplaced during the procedure.)

Preparation of the inoculum

- Open an ampule of API® Suspension Medium, 2 ml (3 ml if the ATB ™ Inoculator is used) as indicated in the paragraph "Warnings and Precautions" of the API Suspension Medium package insert, or use any tube containing sterile distilled water without additives.
- Using a sterile swab, harvest the growth obtained on a Columbia sheep blood agar plate.
- Prepare a suspension with a turbidity adjusted to diode no. 30 using the ATB Densitometer or 4 McFarland using the DENSIMAT, or compare with a turbidity control (McFarland Standard). This suspension must be used immediately after preparation.
  NOTE : If the strip is to be read AUTOMATICALLY, the ATB Densitometer or the DENSIMAT must be used to adjust the turbidity of the bacterial suspension.

Inoculation of the strip

- AUTOMATIC inoculation :
  - Place the strip, the inoculated ampule of API Suspension Medium and a Tip on the ATB Inoculator tray.
  - The inoculator will automatically homogenize the contents of the ampule and fill the cupules (55 µl / cupule).
- MANUAL inoculation :
  - Homogenize the ampule of inoculated API Suspension Medium and dispense 55 µl of the suspension into each cupule of the strip using the ATB Electronic Pipette.
- Place the lid on the strip.
- Incubate at 36°C ± 2°C for 4 - 4 ½ hours in aerobic conditions.

READING AND INTERPRETATION

Reading the strip

Reveal the reactions in row 0 :
- VP test (test 0.0) :
  add 1 drop of VP A and VP B reagents.
- Tests APPA to GTA (tests 0.1, 0.2, 0.3, 0.4 and 0.5) :
  add 1 drop of FB reagent.
- HIP test (test 0.6) :
  add 1 drop of NIN reagent.

Read after 5 minutes (do not exceed 10 minutes) :

- AUTOMATIC reading using ATB Expression™ or ***mini API*** ® :
  - check that the middle part of the strip is clean so that the reader can recognize the strip code,
  - check that the name printed on the strip corresponds to the strip name displayed by the software.

  The reader records the color for each cupule and transmits the information to the computer.
- VISUAL reading :
  refer to the Reading Table. Record the results on the result sheet.

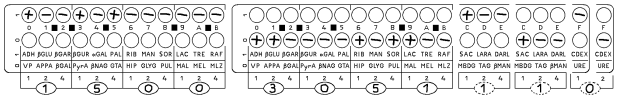
NOTE : According to the lot, a slight variation in the shade and depth of the reaction coloration may be observed for some bacterial species.

Interpretation

Identification is obtained using the database (V3.0) :

- AFTER AUTOMATIC READING :
  the results transmitted to the computer are interpreted by the ATB Expression or ***mini API*** identification software.
- AFTER VISUAL READING :
  the reactions obtained are coded into a **numerical profile** :
  On the result sheet, the tests are separated into groups of 3 and a number 1, 2 or 4 is indicated for each. The values corresponding to positive reactions are then added together within each group.

  Identification is obtained using the **api*web*™** identification software by manually entering the 11-digit numerical profile : the 4 digits from the upper row (1.0-1.B), followed by the 4 digits from the lower row (0.0-0.B), and completed by the 3 digits from the following supplementary tests :
  - 9th digit for coding tests SAC, LARA, DARL (1.C, 1.D, 1.E)
  - 10th digit for MBDG, TAG, βMAN (0.C, 0.D, 0.E)
  - 11th digit for CDEX, URE (1.F, 0.F).



1500 3051 110 *Streptococcus agalactiae*

QUALITY CONTROL

The strips are systematically controlled at various stages of their manufacture. For those users who wish to perform their own quality control tests with the strip, it is preferable to use the strain **1. *Streptococcus agalactiae* ATCC® 12401** or else one of the following strains :

2. *Streptococcus equi* ssp *equi* ATCC 33398 3. *Streptococcus vestibularis* ATCC 49124

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

	ADH	ßGLU	ßGAR	ßGUR	αGAL	PAL	RIB	MAN	SOR	LAC	TRE	RAF	SAC	LARA	DARL	CDEX	VP	APPA	ßGAL	PYRA	ßNAG	GTA	HIP	GLYG	PUL	MAL	MEL	MLZ	MBDG	TAG	ßMAN	URE
1.	**+**	**–**	**–**	**+**	**+**	**+**	**+**	**–**	**–**	**–**	**+**	**–**	**+**	**–**	**–**	**–**	**+**	**+**	**–**	**–**	**–**	**–**	**+**	**–**	**+**	**+**	**–**	**–**	**+**	**–**	**–**	**–**
2.	+	–	–	+	–	+	–	–	–	–	–	–	+	–	–	+	–	+	–	–	–	–	–	+	+	+	–	–	+	–	V	–
3.	–	+	V	–	–	–	–	–	–	+	–	–	+	–	–	–	+	+	+	–	–	–	–	–	–	+	–	–	–	–	–	+

Profiles obtained after culture of the strains on Columbia sheep blood agar and automatic reading of the results.

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

RECOMMENDATIONS

To obtain the best results with the RAPID ID 32 STREP strip, it is important to scrupulously respect the following points of the procedure :

- Use the isolation medium recommended in this package insert (Columbia agar + 5 % sheep blood Ref. 43 041 / 43 049).
- Precisely adjust the inoculum to diode no. 30 using the ATB ™ Densitometer or 4 McFarland using the DENSIMAT. The ATB Densitometer or the DENSIMAT must be used if the strip is to be read and interpreted by ATB Expression ™ or ***mini API*** ®.
- Dispense exactly 55 µl per cupule with the ATB Electronic Pipette or the ATB Inoculator (essential if the strip is to be read and interpreted by the ATB Expression or ***mini API***).
- Respect the incubation time and the reading time.
- The reagents should be of good quality : check the expiry date and storage conditions and use within one month of opening the ampules.

LIMITATIONS OF THE METHOD

- The RAPID ID 32 STREP system is intended uniquely for the identification of the species included in the database (see Identification Table at the end of this package insert). It cannot be used to identify any other micro-organisms or to exclude their presence.
- Blood agar media, with Schaedler, TSA or Mueller Hinton base, should not be used for subculture as they modify the biochemical reactions obtained on the RAPID ID 32 STREP strip.
- 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

4085 collection strains and strains of various origins belonging to species included in the database were tested :

- 94.3 % of the strains were correctly identified (with or without supplementary tests).
- 3.7 % of the strains were not identified.
- 2.0 % 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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READING TABLE

CUPULE	TEST	ACTIVE INGREDIENTS	QTY (mg/cup.)	REACTIONS / ENZYMES	RESULT	
					NEGATIVE	POSITIVE
1.0	ADH	L-arginine	0.76	Arginine DiHydrolase	yellow	red orange-red
1.1	ßGLU	resorufin-ßD-glucopyranoside	0.0032	ß GLUcosidase	pale orange	fluorescent pink red-orange
1.2	ßGAR	resorufin-ßD-galactopyranoside	0.0032	ß GALactosidase	orange	fluorescent pink red-orange
1.3	ßGUR	resorufin-ßD-glucuronide	0.0032	ß GlUcURonidase		
1.4	αGAL	4-nitrophenyl-αD-galactopyranoside	0.096	α GALactosidase	colorless	yellow
1.5	PAL	4-nitrophenyl-ßD-galactopyranoside-2-CHA	0.084	ALkaline Phosphatase	colorless very pale yellow	yellow
1.6	RIB	D-ribose	0.55	RIBose (Acidification)	red red-orange	yellow orange
1.7	MAN	D-mannitol	0.55	MANnitol (Acidification)		
1.8	SOR	D-sorbitol	0.55	SORbitol (Acidification)		
1.9	LAC	D-lactose (bovine origin)	0.55	LACtose (Acidification)		
1.A	TRE	D-trehalose	0.55	TREhalose (Acidification)		
1.B	RAF	D-raffinose	0.55	RAFfinose (Acidification)		
1.C	SAC	D-saccharose (sucrose)	0.55	SACcharose (Acidification)		
1.D	LARA	L-arabinose	0.55	L-ARAbinose (Acidification)		
1.E	DARL	D-arabitol	0.55	D-ARabitoL (Acidification)		
1.F	CDEX	αcyclodextrin	0.275	CycloDEXtrin (Acidification)		
0.0	VP	sodium pyruvate	0.19	Acetoin production (Voges Proskauer)	VP A + VP B / 5 min < 10 min colorless	pink
0.1	APPA	L-alanyl-L-phenylalanyl-L-proline-ß-naphthylamide	0.049	Alanyl-Phenylalanyl-Proline Arylamidase	FB / 5 min < 10 min (APPA → GTA) colorless pale orange	orange
0.2	ßGAL	2-naphthyl-ßD-galactopyranoside	0.038	ß GALactosidase	colorless pale orange pale purple	purple
0.3	PyrA	pyroglutamic acid-ß-naphthylamide	0.0254	Pyroglutamic acid Arylamidase	colorless pale orange	orange
0.4	ßNAG	6-bromo-2-naphthyl-N-acetyl-ßD-glucosaminide	0.043	N-Acetyl-ß-Glucosaminidase	colorless pale orange pale purple	purple
0.5	GTA	L-glycyl-L-tryptophan-ß-naphthylamide	0.05	Glycyl-Tryptophan Arylamidase	colorless pale orange	orange
0.6	HIP	sodium hippurate	1.5	Hydrolysis of HIPpurate	NIN / 5 min < 10 min colorless bluish-grey	blue
0.7	GLYG	glycogen	0.55	GLYcoGen (Acidification)	red red-orange	yellow orange
0.8	PUL	pullulan	0.55	PULlulane (Acidification)		
0.9	MAL	D-maltose	0.55	MALtose (Acidification)		
0.A	MEL	D-melibiose	0.55	MELibiose (Acidification)		
0.B	MLZ	D-melezitose	0.55	MeLeZitose (Acidification)		
0.C	MBDG	methyl-ßD-glucopyranoside	0.55	Methyl-ßD Gluco-pyranoside (Acidification)		
0.D	TAG	D-tagatose	0.55	TAGatose (Acidification)		
0.E	ßMAN	4-nitrophenyl-ßD-mannopyranoside	0.03	ß MANnosidase	colorless	yellow
0.F	URE	urea	0.448	UREase	yellow beige-pink	pink red-violet

- The quantities indicated may be adjusted depending on the titer of the raw materials used.
- Certain cupules contain products of animal origin, notably peptones.

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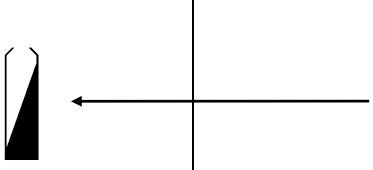
METHODOLOGIE / PROCEDURE / METHODIK / TECNICA / PROCEDIMENTO / ΔΙΑΔΙΚΑΣΙΑ / METOD / METODE / METODYKA

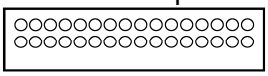
Gélose Columbia + 5% sang de mouton / Columbia agar + 5% sheep blood / Columbia Agar + 5% Schafblut / Agar Columbia + 5% sangre de cordero / Agar Columbia + 5% sangue di montone / Gelose Columbia + 5% de sangue de carneiro / Άγαρ Columbia + 5% αίμα προβάτου / Columbia agar + 5 % fårblod / Columbia agar + 5% fåreblod / Agar Columbia + 5% krwi baraniej



4 McF /
Diode 30/Diodo 30/Díodo 30/
Δίοδο 30/Diod 30/Dioda 30

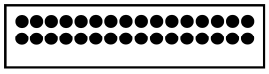
API® Suspension Medium

32 x 55 µl



RAPID ID 32 STREP

4:00 - 4:30 **36°C ± 2°C**



RAPID ID 32 STREP

+ - + - + -

VP : **VP A + VP B**
APPA ⟶ GTA : **FB**
HIP : **NIN**

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

% de réactions positives après 4 H - 4 H 30 à 36°C ± 2°C / % of positive reactions after 4 - 4 ½ hrs. at 36°C ± 2°C / % der positiven Reaktionen nach 4 - 4 ½ h bei 36°C ± 2°C / % de las reacciones positivas después de 4 H - 4 H 30 a 36°C ± 2°C / % di reazioni positive dopo 4 ore - 4 ore 30 a 36°C ± 2°C / % de reacções positivas após 4 H - 4 H 30 a 36°C ± 2°C / % θετικών αντιδράσεων μετά από 4 - 4 ½ ώρες στους 36°C ± 2°C / % positiva reaktioner efter 4 - 4 ½ tim. vid 36°C ± 2°C / % positive reaktioner efter 4 - 4 ½ timer ved 36°C ± 2°C /% pozytywnych reakcji po 4 - 4 ½ godzinach w 36°C ± 2°C

RAPID ID 32 Strep V3.0	ADH	ßGLU	ßGAR	ßGUR	αGAL	PAL	RIB	MAN	SOR	LAC	TRE	RAF	VP	APPA	ßGAL	PYRA	ßNAG	GTA	HIP	GLYG	PUL	MAL	MEL	MLZ	SAC	LARA	DARL	MßDG	TAG	ßMAN	CDEX	URE
Abiotrophia defectiva	1	0	**50**	0	**99**	0	0	0	0	**50**	**100**	**50**	0	**50**	**99**	**75**	0	0	0	0	**95**	**100**	5	0	**100**	0	0	0	1	0	0	0
Aerococcus viridans	1	**70**	3	**30**	**60**	0	**28**	**75**	**25**	**79**	**91**	**42**	1	0	10	**83**	0	0	**92**	10	10	**95**	4	0	**100**	1	0	**65**	1	1	1	0
Aerococcus urinae	0	0	0	**100**	0	0	**91**	**100**	**78**	0	0	0	1	1	0	0	0	0	**100**	0	0	0	0	0	**97**	0	**81**	0	0	0	0	0
Alloiococcus otitis	0	0	0	0	0	0	0	0	0	0	**30**	0	0	0	**99**	**99**	0	0	**25**	1	0	0	0	0	0	0	0	0	0	0	0	0
Enterococcus avium	0	**99**	0	0	20	0	**100**	**100**	**80**	**95**	**100**	10	**99**	**99**	0	**88**	0	1	1	0	0	**100**	3	**97**	10	**96**	**96**	**98**	**98**	0	5	0
Enterococcus casseliflavus	**70**	**100**	**26**	1	**95**	0	**99**	**99**	**26**	**100**	**100**	**90**	**95**	0	**99**	**69**	**75**	**80**	1	0	0	**100**	**95**	5	**97**	**99**	1	**100**	**35**	**95**	7	0
Enterococcus cecorum	0	**100**	11	**88**	**100**	**94**	**98**	**38**	11	**100**	**100**	**88**	**66**	0	**33**	0	**88**	**94**	1	**27**	0	**100**	**98**	**55**	**100**	0	0	**98**	**64**	**41**	**66**	0
Enterococcus durans	**100**	**90**	2	0	**30**	0	**99**	0	0	**95**	**46**	0	**99**	1	**61**	**99**	**74**	**40**	15	0	0	**99**	1	0	**26**	15	0	**85**	**26**	**80**	**61**	0
Enterococcus faecalis	**99**	**99**	2	0	1	5	**99**	**99**	**80**	**98**	**95**	1	**99**	1	1	**99**	**50**	**50**	**26**	1	0	**99**	0	**74**	**95**	1	1	**99**	**95**	**50**	**99**	0
Enterococcus faecium 1	**99**	**99**	10	1	**50**	0	**99**	**98**	1	**99**	**95**	0	**99**	1	**95**	**99**	**50**	8	**38**	1	0	**99**	**30**	0	**99**	**100**	0	**83**	8	15	**90**	1
Enterococcus faecium 2	**100**	**88**	1	0	**99**	0	**99**	**99**	1	**99**	**99**	**99**	**99**	0	**66**	**99**	2	1	**25**	1	0	**99**	**99**	0	**66**	**99**	0	**44**	2	17	**91**	1
Enterococcus gallinarum	**99**	**99**	**26**	10	**93**	1	**99**	**99**	2	**100**	**100**	**74**	**99**	0	**99**	**98**	**95**	**90**	**99**	0	0	**100**	**90**	0	**99**	**99**	1	**100**	**74**	**50**	**90**	0
Enterococcus hirae	**100**	**99**	7	0	**70**	1	**99**	1	0	**80**	**99**	7	**99**	0	**82**	**99**	**50**	**50**	15	0	1	**100**	**70**	0	**99**	1	0	**100**	**57**	**50**	**99**	0
Enterococcus saccharolyticus	0	**100**	1	0	**100**	0	0	**100**	**99**	**99**	**100**	**100**	1	0	1	0	**99**	**99**	0	0	0	**100**	**100**	**100**	**100**	0	**99**	**100**	0	0	**100**	0
Erysipelothrix rhusiopathiae	**42**	1	**99**	0	0	**28**	0	0	0	**75**	0	0	0	**64**	0	**100**	**80**	**85**	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gardnerella vaginalis	0	0	**82**	0	0	**99**	**95**	0	0	0	1	0	0	**99**	**82**	0	0	0	**74**	**50**	**50**	**100**	0	0	1	10	0	0	0	0	**70**	0
Gemella haemolysans	0	0	0	0	0	**55**	0	15	5	0	0	0	10	10	0	**70**	0	10	0	0	0	**95**	0	0	**44**	0	0	0	0	0	0	0
Gemella morbillorum	2	1	0	0	0	8	0	1	0	0	9	2	2	**55**	0	**25**	0	**44**	0	0	15	**100**	0	0	**81**	0	0	0	10	0	0	2
Globicatella sanguinis	1	**70**	17	17	**95**	4	**75**	**82**	**35**	**60**	**95**	**89**	0	**25**	**95**	**40**	0	0	**60**	**82**	**50**	**95**	**89**	0	**100**	**45**	0	**70**	**35**	**45**	0	0
Granulicatella adiacens	1	3	0	**30**	1	0	0	1	0	3	0	0	0	**99**	0	**70**	**25**	1	0	0	0	**90**	0	0	**99**	0	0	0	**60**	0	0	0
Lactococcus garvieae	**100**	**100**	0	0	0	0	**35**	**75**	0	**50**	**100**	0	**100**	**100**	0	**74**	10	0	0	0	0	**75**	0	0	**50**	0	0	**85**	**50**	0	**50**	0
Lactococcus lactis ssp cremoris	0	**26**	**30**	0	0	**30**	0	0	0	**96**	1	0	**96**	**99**	0	1	0	0	**66**	0	0	1	0	0	0	0	0	0	0	0	1	0
Lactococcus lactis ssp lactis	**99**	**100**	5	0	0	0	**95**	**26**	0	**50**	**75**	0	**74**	**100**	**26**	1	**50**	0	**26**	0	0	**100**	0	0	**26**	1	0	**85**	3	**50**	**95**	0
Lactococcus raffinolactis	0	**100**	5	0	**100**	**74**	0	**50**	5	**100**	**100**	**74**	**99**	**100**	0	0	**74**	0	0	0	0	**100**	**25**	5	**100**	**26**	0	5	0	0	**90**	0
Leuconostoc spp	2	**36**	**44**	0	**72**	5	**25**	**36**	0	**44**	**55**	**50**	**94**	**33**	**91**	0	0	0	2	0	0	**80**	**61**	0	**72**	16	2	13	0	0	19	0
Listeria grayi	0	**100**	0	0	0	0	**100**	**100**	0	**99**	**100**	0	**99**	1	0	0	**99**	**50**	1	0	0	**100**	0	0	0	0	**99**	**99**	0	**100**	**100**	0
Listeria spp	0	**100**	0	0	0	**30**	1	0	0	22	**97**	1	**70**	0	5	0	**99**	**95**	**74**	0	0	**99**	0	0	1	0	**80**	**99**	5	**100**	**92**	0
Streptococcus agalactiae	**100**	0	1	**50**	10	**99**	**85**	0	1	**30**	**74**	0	**90**	**99**	0	1	1	1	**99**	4	**99**	**100**	0	0	**100**	0	0	**90**	**26**	0	0	0
Streptococcus alactolyticus	0	**50**	0	1	**89**	1	0	**74**	5	0	**26**	**83**	**100**	**100**	0	0	0	1	1	1	1	**100**	10	0	**99**	0	0	**50**	0	0	0	**50**
Streptococcus anginosus	**99**	**100**	22	0	**27**	**97**	5	**25**	0	**62**	**92**	**27**	**97**	**97**	2	0	1	2	0	0	**60**	**99**	20	1	**100**	5	0	**89**	7	5	0	1
Streptococcus bovis I	0	**100**	1	0	**42**	1	1	**99**	0	**99**	**100**	**61**	**99**	**99**	1	1	1	1	0	**98**	**95**	**100**	3	0	**100**	0	0	**100**	1	**58**	0	0
Streptococcus bovis II 1	1	1	7	0	**92**	0	0	0	0	**82**	0	**98**	**100**	**100**	0	0	1	1	0	**82**	**82**	**100**	**64**	0	**100**	0	0	0	0	1	0	0
Streptococcus bovis II 2	0	**100**	1	**99**	**90**	1	0	0	0	**100**	**100**	**67**	**99**	**100**	**99**	0	9	0	1	0	0	**100**	9	22	**100**	0	0	**100**	0	**94**	0	0
Streptococcus bovis II 3	0	**93**	0	0	**100**	0	0	0	0	**100**	0	**40**	**98**	**100**	0	0	1	1	0	0	0	**100**	0	0	**100**	0	0	**93**	0	1	0	0
Streptococcus bovis II 4	1	**100**	0	1	**99**	2	0	0	0	**31**	**37**	**55**	**97**	**100**	1	0	1	0	0	**91**	**57**	**100**	**48**	0	**100**	8	0	**98**	0	10	1	0

RAPID ID 32 Strep V3.0	ADH	ßGLU	ßGAR	ßGUR	αGAL	PAL	RIB	MAN	SOR	LAC	TRE	RAF	VP	APPA	ßGAL	PYRA	ßNAG	GTA	HIP	GLYG	PUL	MAL	MEL	MLZ	SAC	LARA	DARL	MßDG	TAG	ßMAN	CDEX	URE
Streptococcus canis	99	1	1	26	85	100	99	0	0	85	26	1	1	100	74	0	0	1	5	0	99	100	0	0	99	0	0	99	0	0	0	0
Streptococcus constellatus	100	11	2	0	0	100	2	2	0	19	80	0	100	100	5	0	2	5	0	0	2	99	0	0	97	2	0	77	0	0	0	0
Streptococcus downei/sobrinus	0	1	0	0	0	0	0	99	1	99	100	1	100	100	0	0	0	0	1	0	0	100	0	0	99	0	0	0	95	0	0	0
Streptococcus dysgalactiae ssp dysgalactiae	99	0	1	100	0	100	99	1	26	99	100	0	0	100	1	0	0	1	1	15	100	99	0	0	100	0	0	0	74	0	1	0
Streptococcus dysgalactiae ssp equisimilis	99	3	5	85	0	98	97	0	0	50	99	0	1	99	1	0	0	1	2	30	99	100	0	0	99	1	0	60	1	0	24	1
Streptococcus equi equi	100	1	0	100	0	100	0	0	0	0	0	0	0	100	0	0	0	0	0	100	100	100	0	0	100	0	0	99	0	26	70	0
Streptococcus equi zooepidem.	100	1	0	100	0	100	25	0	90	98	0	0	0	100	0	0	0	0	0	100	99	100	0	0	100	0	0	98	0	2	98	0
Streptococcus equinus	0	99	0	0	1	0	0	0	0	0	26	1	100	100	0	0	1	1	0	1	1	100	1	0	100	0	0	95	0	0	0	0
Streptococcus gordonii	95	95	90	0	28	100	0	0	0	85	99	4	0	100	1	0	0	35	0	0	0	99	1	0	100	0	0	74	1	90	1	0
Streptococcus group L	100	0	0	99	0	99	100	0	0	85	100	0	0	100	0	0	1	1	74	95	100	100	0	0	100	0	0	0	0	1	70	0
Streptococcus intermedius	86	90	99	0	0	99	4	2	0	100	99	0	100	100	89	0	97	51	0	0	97	97	0	2	100	2	0	27	1	20	0	0
Streptococcus mitis 1	1	0	65	0	10	39	17	0	1	97	9	11	4	99	1	1	1	30	1	0	98	99	5	0	100	0	0	0	1	0	1	0
Streptococcus mitis 2	14	1	20	0	24	8	1	0	1	60	45	60	9	100	1	0	0	28	0	0	34	70	0	0	89	0	0	1	3	0	0	0
Streptococcus mutans	1	99	0	0	99	1	0	99	80	98	99	99	99	74	0	1	1	0	1	1	0	99	95	1	100	0	1	74	50	0	0	0
Streptococcus oralis 1	2	4	98	0	93	93	0	1	1	99	40	93	3	100	23	1	26	99	1	3	99	100	80	0	100	0	0	1	40	5	3	0
Streptococcus oralis 2	1	1	89	0	8	62	1	1	1	97	26	40	22	100	17	0	9	70	0	0	90	99	7	0	100	0	0	0	27	6	1	0
Streptococcus oralis 3	0	0	89	0	6	11	5	0	0	68	13	68	7	100	0	0	0	0	0	0	0	24	0	0	47	6	0	0	6	0	0	0
Streptococcus parasanguinis	72	34	99	0	65	89	0	0	1	94	50	65	0	100	27	1	10	39	10	0	0	100	55	0	100	0	0	20	31	19	1	0
Streptococcus pneumoniae	26	26	88	1	84	1	0	0	0	99	95	84	1	99	2	23	74	90	1	1	74	79	5	0	98	1	0	14	2	0	0	0
Streptococcus porcinus	100	85	0	100	80	100	80	99	74	30	100	0	99	100	0	1	1	0	1	0	74	99	0	0	99	0	0	50	0	0	0	0
Streptococcus pyogenes	98	0	0	15	0	100	1	8	0	99	99	1	1	99	0	99	0	1	0	35	85	99	0	0	99	0	0	97	0	0	35	0
Streptococcus salivarius	0	99	71	0	2	1	0	0	1	78	70	64	99	100	74	0	0	1	0	0	95	100	5	0	100	0	0	70	2	0	0	70
Streptococcus sanguinis 1	86	38	23	0	54	0	5	3	93	89	99	46	1	99	3	0	1	97	6	0	100	100	38	0	100	3	0	19	37	1	1	1
Streptococcus sanguinis 2	70	58	10	0	60	2	2	4	4	81	97	52	0	98	2	0	2	74	0	0	77	100	26	0	100	1	0	21	18	1	1	2
Streptococcus suis I	95	60	36	99	85	9	0	5	0	98	100	0	0	100	15	50	40	45	0	85	100	85	0	0	100	0	0	70	5	20	2	0
Streptococcus suis II	99	85	25	90	100	1	0	1	0	99	99	100	0	100	36	30	10	41	0	99	100	99	5	0	100	0	0	90	2	20	5	2
Streptococcus thermophilus	0	0	100	0	0	5	0	0	0	100	0	0	80	100	100	0	0	5	0	0	0	1	0	0	99	0	0	0	0	0	0	75
Streptococcus uberis 1	100	100	30	99	15	5	99	100	99	100	99	20	100	100	1	30	1	1	90	5	1	100	1	1	100	0	0	100	5	1	0	0
Streptococcus uberis 2	100	100	1	1	15	1	99	100	99	100	99	10	100	100	0	10	1	0	50	1	1	100	1	10	100	0	0	100	30	30	0	0
Streptococcus vestibularis	5	99	95	0	0	0	1	0	0	100	1	2	95	100	95	0	0	0	0	1	2	100	0	0	99	0	0	10	2	0	0	95

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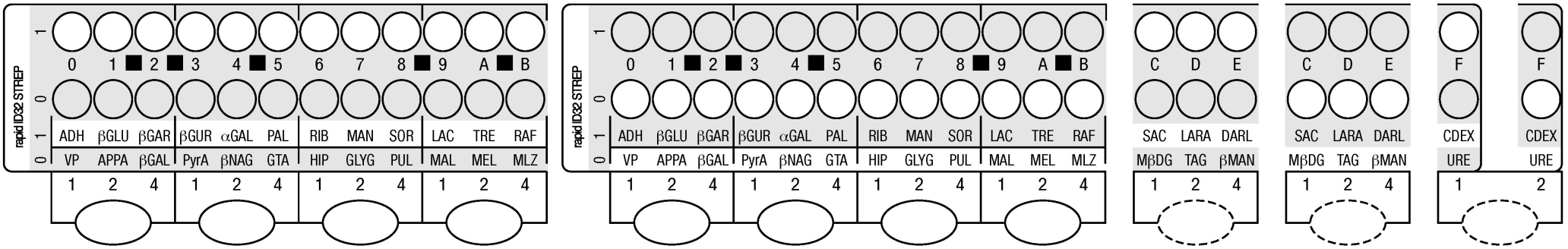

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