

Analytical report

Cario-Analyse - Microbial Test for Evaluation of Caries Risk

Dentist information

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Sample information

Patient : Fred Adamsberg
 Saliva sample
 Accession number : GCAR171011-001
 Date of collection : 05/10/2017
 Date of analysis : 09/10/2017

Measurement of the buffer capacity of saliva

The buffer capacity of saliva is low

Bacterial Quantification with real-time Polymerase Chain Reaction technology

Bacteria	Number of bacteria / ml of saliva	% bacteria / total bacteria
Total bacteria	1,8E+08	100%
Lactobacillus spp.	4,5E+06	2,55%
Streptococcus mutans	9,8E+06	5,55%

Microbiological situations/Treatment considerations

If primary caries lesion:

High risk patient Second test in 12 months during annual check-up

If secondary caries lesion:

High risk patient Second test in 3 months for new risk evaluation

Risk & threshold definition

Caries risk levels for Lactobacillus spp. and Streptococcus mutans for primary and secondary lesions :

Primary caries lesion

Low risk : < 1E+06 Streptococcus mutans /ml of saliva

High risk : ≥ 1E+06 Streptococcus mutans /ml of saliva

Secondary caries lesion

Low risk : < 1E+04 Lactobacillus spp./ml of saliva & < 1E+06 Streptococcus mutans /ml of saliva

Moderate risk : ≥ 1E+04 Lactobacillus spp. /ml of saliva & < 1E+06 Streptococcus mutans /ml of saliva

High risk : ≥ 1E+04 Lactobacillus spp. /ml of saliva & ≥ 1E+06 Streptococcus mutans /ml of saliva

All these risks could be increased by low buffer capacity.

All these risks are reduced by personal intensive preventive care (fluoride, plaque control, dietary plan).

PCR method definition

Analyse is performed on saliva sample. Minimal volume required for complete analysis is 600 µl of saliva.

Genomic DNA is extracted from the submitted sample and tested for micro-organisms associated with caries risk.

The bacterial DNA is tested by quantitative Polymerase Chain Reaction (PCR) amplification method.

References

Arino M. et al. Multicenter study on caries risk assessment in adults using survival Classification and Regression Trees. Sci. Rep. 6, 29190; doi: 10.1038/srep29190 (2016).