AMA PERIODONTAL TEST
(bana type method)

INTENDED USE AND PRINCIPLE OF OPERATION

The intended use is rapid “Red complex” oral bacteria qualitative detection by establishing the presence of proteolytic activity in a subgingival plaque taken from either adult or child patients. The device is applied by dentists, odontologists, laboratory assistants, chair-side assistants. ”Red complex” bacteria (Tannerella forsythia, Porphyromonas gingivalis, Treponema denticola) produce trypsin-like proteases that hydrolyse the synthetic peptide, Benzoyl-DL-arginine-B-naphthylamide. The detection of the proteolytic activity is based on the following biochemical reactions:

Trypsin-like proteases

Benzoyl-DL-arginine-B-napthylamide (BANA) $\longrightarrow$ Nα-benzoyl-Larginine (BA) + β-naphthylamine (β-NA)

β-naphthylamine (β-NA) + FBK salt $\longrightarrow$ Blue colour spot

The principle of operation of AMA DENT is based on the colour change of the indicator element after its level-to-level alignment with the reactive element on which the biological sample has been placed. In the event of proteolytic activity in the biological sample, a light or dark blue spot appears on the indicator element of the test. The test is intended for the doctor’s office. Only the fresh obtained biological samples should be used for the test.

Biological test samples could be:

● Dental plaque ● Subgingival calculus
● Dental biofilm ● Gingival crevicular fluid

One or two samples of the one patient can be tested at the same time. The volume of a biological sample should be no less than 1.5 µl. If “Red complex” bacteria are present in the sample, a light or dark blue spot appears on the indicator element of the test within ten minutes.