OSADA APIT11

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PRODUCT: OSADA APIT 11 CODE NO.: 5042 MODEL: EM-S11

- ●GENERAL NAME : Apex Locator
- ●POWER SOURCE : 1) Power Voltage: DC6V (4 pcs. of AA alkaline dry batteries) Power Input: 15mA

2) Power Voltage: DC4.8V (4 pcs. of AA rechargeable Nickel Metal Hydride batteries) Power Input: 20mA

- ●DIMENSIONS: W100 X D79 XH101mm
- •WEIGHT: 420g (excluding batteries)
- ●APPROVAL NUMBER: 223AHBZX00006000
- •CLASSIFICATION: Internally powered equipment Type BF applied part

**SUBJECT TO CHANGES IN SPECIFICATIONS AND/OR DESIGNS, WITHOUT PRIOR NOTICE.



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IN THE CUTE BODY,

THE ACCURACY AND EASY TO USE USABILITY ARE PACKED IN.



MEASURING METHOD (EMR BY RELATIVE VALUE METHOD)

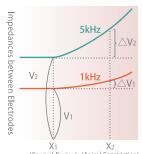
The measurement brought out by Apit is from using two different frequencies. The apical constriction (apical foramen) is detected from the value gained

from the comparison of the balances of impedances* by two different frequencies measured

at two positions in the root canal, one at anywhere located at the cervical region

and another one measured in the same way at the apical constriction region shifted down from the cervical position.

^{*}Impedance≒Resistance in the root canal *Impedance has the dependency on frequency.



■ THE VALUE INDICATION BY RELATIVE VALUE METHOD

In the left drawing, the change of impedances of 1kHz and 5kHz is shown as the reamer is being shifted after inserted into the root canal. The change of the impedances of 1 kHz and 5kHz is shown almost invariable when the reamer is staying at the cervical region and its vicinity.

The balance of 1kHz impedance and 5kHz impedance at the cervical region. $VX_1 = V_2 - V_1$

At the point of X_1 (at zero adjustment position, cervical region), V_1 is impedance value of 1kHz, V_2 is impedance value of 5kHz, and these values differ a lot depending on the environmental conditions of root canal. So, the balance V2-V1 should not be considered as the indicative value as it varies widely.

The balance of impedance by 1kHz and 5kHz at X2 (apical constriction area) is: $VX_2 = (V_2 + \triangle V_2) - (V_1 + \triangle V_1)$ The balance of impedances in relative change from X1 to X2:

However, at the apical constriction area, X_2 , if trying to get the balance similarly, the result is $\triangle V_2$ - $\triangle V_1$ and as V_1 and V_2 are both cancelled out and as the result, the impedance in the relative change which is dependent on the frequencies of 1kHz and 5kHz can be got.

By setting this value as the indicative value, the very accurate electric device for reading root canal

THE SECRET OF THE ACCURACY

Displacement of Reamer Electrode

1) The balance of impedances derived from two different frequencies is in comparison.

② For each of every root canal, zero adjustment can be set. The individually different conditions of root canal, tooth structure, periodontal tissues are taken into consideration and one by one the root length is measured accurately.

ADJUSTMENT (ADJ.) FUNCTIONS

OSADA APIT 11 has two modes of functions: one is auto (automatic) adjust mode and another is manual adjust mode.

The root canal which is difficult to be measured because of the electrical leakage can be measured now by the adjustment switch (ADJ.) being pressed and the increase of the applicable cases for this detective method is widely reported.



LIQUID CRYSTAL COLOR DISPLAY

The liquid crystal color display panel is big and easy to observe. The meter indication on the panel well follows the movement of reamer or K-file which is inserted into the root canal and the sensation of reamer reaching the apex is visually captured.

It is easy to see from a distance and the remaining battery power and sound volume, etc., the conditions of the device, can be checked easily.



INDICATIONS ON DISPLAY

- **1** A D J. : Zero Adjustment
- W.L.: Apical Foramen(Apical Constriction)



= Working Length



- ARemaining Battery Power
- **⑤**Adjustment Mode
- ❸Buzzer Sound Volume

ENVIRONMENTALLY-FRIENDLY

The life of alkaline battery has been improved (max. usable time is150 hours)*, and no need of exchanging so often as before. Rechargeable nickel hydride battery can be also used for OSADA APIT 11 (max. 100 hours usable after once charged) and can be used repeatedly.

*(in comparison with our conventional model)

OSADA APIT 11

SECURE AND SAFE TREATMENT

The power current used for the measurement is very weak, less than 2µA, and can give safe treatment without giving any pain

or scary feelings to patients. The checker function of the device is incorporated in the body itself.

By checking-up the function regularly the safe measurement can be practiced.



EASY TO USE THE FILE HOLDER

For using it for molar teeth, the file holder of the file holder cord has been made longer by 10mm and full length now is 50mm. The top end of the file holder is so thin as 0.5mm and the file length can be utilized fully till its maximum.



*(in comparison with our conventional model) APIT 11 Conventional

COLOR VARIATION

Four (4) colors, Marine Navy, Frost Gray, Cloud Blue and Bloom Pink are ready for the choice. Please select one which suits the atmosphere of the clinic or according to your liking.



AUTO-WINDING MODULE

By depressing the button once, the probe cord can be recoiled automatically and retracted into the body.

