

point

treatments. *activ point* is as easy the incorporated chlorhexidine (CHX) against bacteria and other organisms, even in low concentrations.

Should paste be used with *activ point*?

Paste is not necessary for dissociation.

Is one *activ point* sufficient?

In ISO shaped canals yes. In extremely conical or oval canals further points can be used.

Should *activ point* be condensed in the canal?

No.

How long should *activ point* remain in the canal?

Normally 1 – 3 weeks, but in specific clinical cases it should be replaced every 2 – 3 days.

Do *activ point* need to be sterilised?

No.

Order Form

Size (ISO)	Contents/pcs	REF	Quantity
15-40	60	367 296	
15	60	367 215	
20	60	367 220	
25	60	367 225	
30	60	367 230	
35	60	367 235	
40	60	367 240	
45-80	60	367 297	
45	60	367 245	
50	60	367 250	
55	60	367 255	
60	60	367 260	
70	60	367 270	
80	60	367 280	

Address Date Signature

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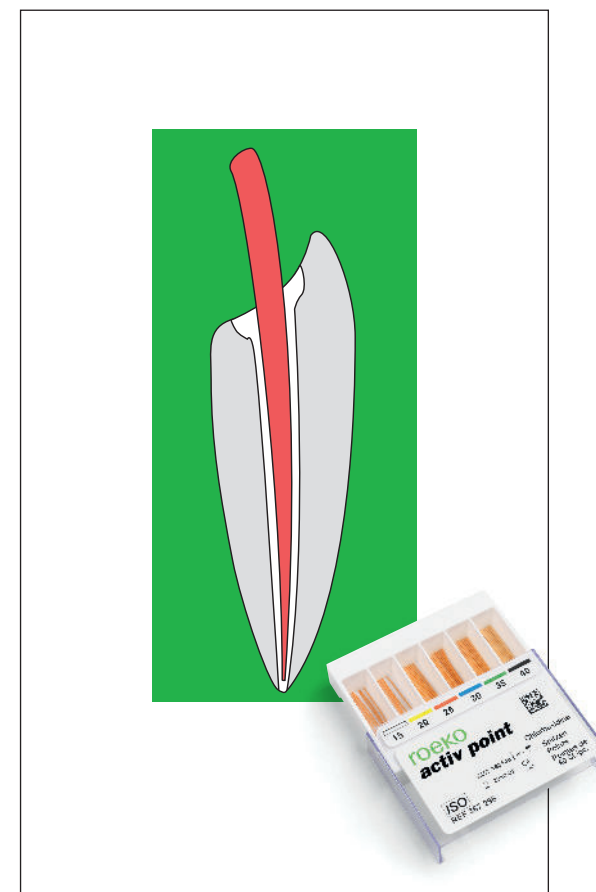
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 **COLTENE®**

roeko activ point



for the temporary filling of root canals, with chlorhexidine diacetate.

 **COLTENE®**

activ

ideal for temporary root canal to apply as a guttapercha point, while is known to be extremely effective including yeasts and fungi

Frequently asked questions:

For which indications is *activ point* recommended?

As a temporary filling for root canals, also in cases where treatment with calcium hydroxide is ineffective.

How is CHX released from the point?

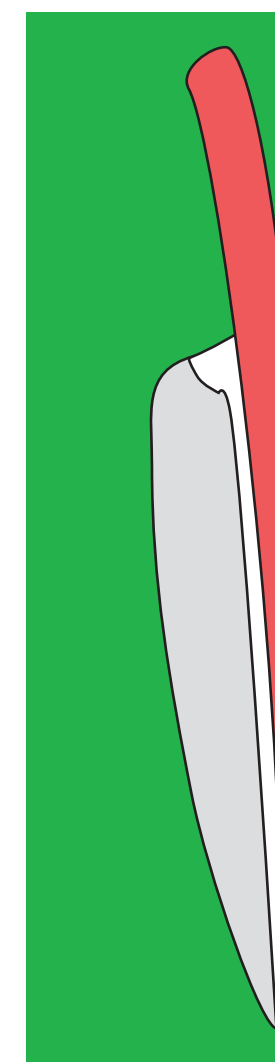
Moisture which has been applied with the point or moisture which flows from the dentine tubules causes dissociation.

Which solutions should be used to rinse the canal?

All standard solutions e.g. NaOCl or H₂O₂ can be used.

Is *activ point* radiopaque?

Yes.



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activ point for temporary root canal filling and prevention of reinfection. The ISO shaped points have a guttapercha matrix with 5 % chlorhexidine diacetate and are radiopaque.

Chlorhexidine has been used effectively in dentistry for many years and is known to be highly effective against bacteria and many organisms, including yeasts and fungi, even in low concentrations. Roeko's innovation, *activ point*, provides a means for applying chlorhexidine directly into the root canal.

Composition:

activ point consists of chlorhexidine diacetate (5 %), guttapercha, ZnO, BaSO₄, and colouring agents.

Indications:

- for temporary filling of root canals
- for emergency root canal treatment

Characteristics:

activ point is ready to use. It is firm for easy introduction into the root canal yet flexible to follow the curves of the canal. When chlorhexidine comes into contact with moisture it releases cations which combine with the anionic molecules on the surface of the cell walls of the bacteria causing osmosis to malfunction. (Petereit & Kirch, W., 1998). Chlorhexidine is more soluble than calcium hydroxide for example. Due to electrostatic bonding and interactions the cations adhere to the dentine, to the enamel and within the oral cavity (Arends & David, 1998). *activ point* has been specially developed for the conditions in the root canal. The canal is so small that there is not even room for a drop of water. The majority of the space is taken up by the *activ point*, so the relationship of CHX to moisture allows a minimal inhibition concentration (Fig. 1).

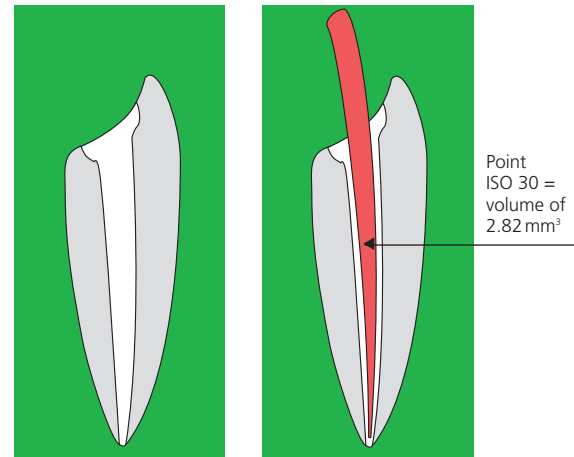


Fig. 1: Root canal prepared to ISO 35 = volume of 3.29 mm³

Fig. 2: Remaining volume of only 0.47 mm³

Application:

The ISO point containing chlorhexidine can be introduced quickly and easily into the canal and removed without any residue. As always, the canal should be sufficiently cleaned and rinsed. An *activ point* corresponding to the last used root canal instrument, or one size smaller, should be marked with the predetermined length and applied into the canal without condensation. A drop of moisture (e.g. sterile H₂O) may be used together with the *activ point* to accelerate the release of CHX. Further dissociation will be initiated by moisture flowing into the canal through the dentine tubules and apex. If the canal is not exactly round more points may be used to ensure sufficient surface contact for the moisture. It is recommended to fold the excess length into the opening of the canal if there is sufficient space. This facilitates removal. The opening should be temporarily sealed with standard materials.

Duration:

1 – 3 weeks. The point should then be changed or the canal permanently filled in the usual manner. In certain clinical situations the point should be replaced at shorter intervals (after 2 – 3 days).

Removal of *activ point*:

The stability of *activ point* is not affected by the release of chlorhexidine in moisture. It can easily be removed with tweezers or a probe even after 3 weeks. No residue is left in the canal.

Tests on *activ point*:

AGAR DIFFUSION TEST: On condition that the substances being tested diffuse in agar, growth and inhibition of bacteria, fungi and yeasts can be tested. When *activ point* and various organisms are put onto an agar plate a clear inhibition area can be seen. The CHX which is released from the point obviously limits the growth of organisms in this test. The size of the inhibition area varies from organism to organism.

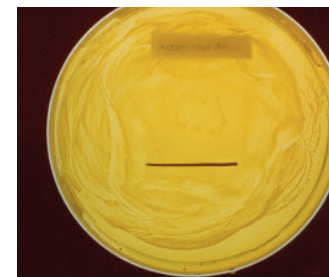


Fig. 3: Guttapercha point agar diffusion test with *Actinomyces naeslundii* shows no inhibition area.

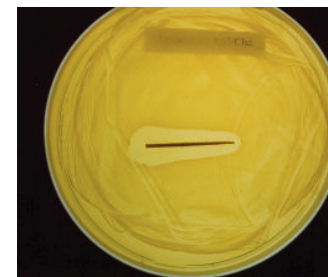


Fig. 4: *activ point* agar diffusion test with *Actinomyces naeslundii* shows a clear inhibition area.

SERUM TEST:

As calcium hydroxide does not diffuse on agar further comparison tests were done in serum. The results show that the growth of certain organisms is impeded more by calcium hydroxide while chlorhexidine inhibits the growth of others more strongly (see figs. 5 + 6).

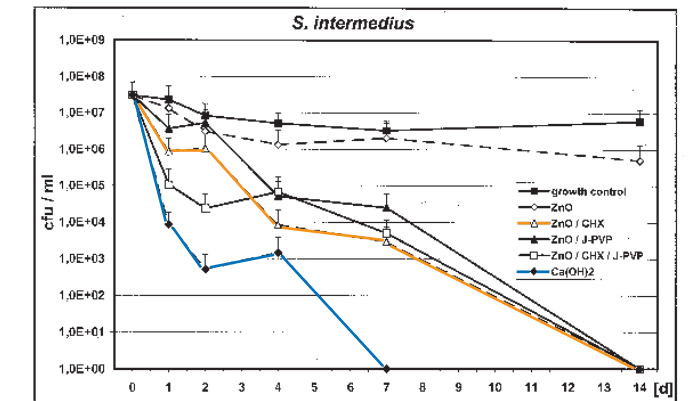


Fig. 5: The effect of various temporary fillings on the growth of *Streptococcus intermedius* (from Podbielski et. al., J.O.E. 2000; 26: 398-403)

On the other hand *P. micros*, for example, is more strongly affected by chlorhexidine diacetate than by calcium hydroxide.

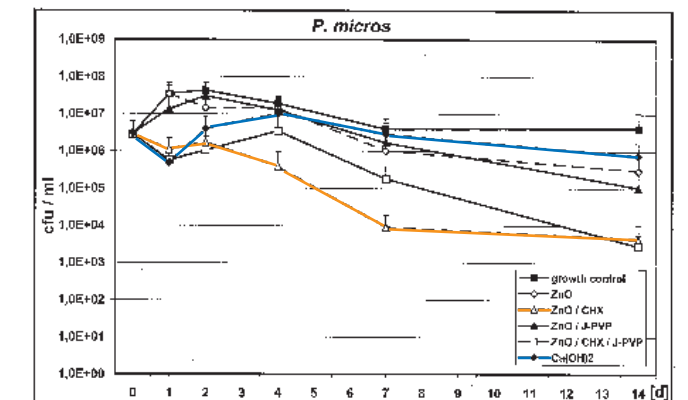


Fig. 6: The effect of various temporary fillings on the growth of *Peptostreptococcus micros* (from Podbielski et. al., J.O.E. 2000; 26: 398-403)

Petereit & Kirch, W., 1998 Side effects of chlorhexidine. ZM 88: 28-29
Arends, J & David, G., 1998. A step in the future, protective varnish containing chlorhexidine. Philip Journal 5-6: 163-168.

Literature:
Shaul Lin, DMD, Ofer Zuckermann, DMD, Ervin I. Weiss, DMD, Yardena Mazor, and Zvi Fuss, DMD: Antibacterial Efficacy of a New Chlorhexidine Slow Release Device to Disinfect Dental Tubules. J.O.E., Vol. 29, No. 6, June 2003 Zvi Fuss, Igor Tsesis, Shaul Lin: Root resorption – diagnosis, classification and treatment choices based on stimulation factors. Dental Traumatology 2003; 19: 175-182