

Test reports Instructions for use Certificates  
 de-ka\_titan  
 Test at a German University  
 Test result: reduction of pain duration  
 Report by Prof. Dr. W. H.-M. Raab on 21.12.2000 – Polyclinic of Stomotology from  
 Düsseldorf  
 Subject: Research of DeKa –Titan’s affectivity.

**Aim:**  
 Study of the affectivity of "DeKa – Titan Pain reliever" in a randomized and controlled test on patients with sensitive neck of teeth with the help of two different devices.

**Material and Method:**  
 Eighteen probationers took part in test; there were 11 persons in the Verum group and 7 persons in the Placebo group. The sensibility test at the respective teeth was done with the help of electrical survey apparatus TVM 02 at a temperature of -20 C°. This apparatus allows a controlled and reproducible thermal irritation of certain teeth. First, the measurements were done without the device (Baseline) and afterwards with the device applied in accordance with the producer’s instructions (Verum & Placebo). Between both of the tests was an interval of about an hour in order to neutralize the process of perception and adaptation. Dependant value was the subjective pain duration (t), i.e. time from the beginning of pain and until the patient had no more pain complaints.

**Results:**  
 The results are shown in the following table. Under the conditions of the test process described above, the application of the device "De-Ka - Titan Pain reliever" leads to a reduction of the subjective pain duration. The average pain duration was reduced in the Verum group from the Baseline of 50.15 to 34.42. The same effect was determined in the Placebo group: the reduction of average pain duration from 15.78 to 13.42. The effect of the device in the Placebo group is lower than in the Verum one. According to the following calculations the value for Verum is  $p=0,084$  (T-test for paired control) and  $p=0,580$  for the Placebo group. From previous investigations, it came out that the application of the device on the Verum group leads to a significant reduction of the pain duration in comparison to the control value. The results suggest that the results in the Verum group exceed the results in the Placebo group under the same test conditions.

**Results:**

t (Middle)	Standard deviation	Paired T-Test
Baseline Verum	50,15 34,42	52,85 41,70 0,084+
Baseline Placebo	15,78 13,42	12,42 12,35 0