

Study 3: Efficiency in practice

Aim of the study

Exploring the effects of a leaking otoplastic on the efficiency (attenuation) under real life conditions.

Date

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Investigator

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Summary

Four test subjects wearing custom moulded earplugs have been subject of double audiometry.

- The first audiogram is made with a 'lektight' custom moulded earplug.
- The second audiogram was made using the same custom moulded earplug which had deliberately made 'leak'. The audiometer used was Peekel with a standard headset.

Comments

1. There is a significant decrease in the attenuation when the custom moulded earplug is 'leak'. The drop in attenuation varied between 5 and 20 dB.
2. The drop in attenuation was significant over all frequencies.

Conclusions

1. 'Leaking ' of a hearing protector (i.c. custom earplug) results in a major decrease of the sound attenuation.
2. He drop in attenuation of the leaking hearing protector is significant over all frequencies.
3. Leaktightness during ' real world' use is a determining factor for the efficiency of the hearing protector. Therefore, the test on leaktightness of a hearing protector should be performed 'in situ'(i.c.the earcanal) and on a regular basis.