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PURE TONE AUDIOMETER FOR OCCUPATIONAL HEALTH

hearTest Occ Health is a certified tablet-based audiometry solution with cloud data management for seamless occupational hearing care.

This portable and robust solution provides the same attenuation as a single-wall sound booth.

hearTest
occ health

COMPLIES TO INTERNATIONAL STANDARDS

- **IEC 60645-1** - Equipment for pure tone audiometry (type 4 audiometer)
- **ANSI S3.6** - Specification for audiometers (type 4 audiometer)
- **ISO 8253-1** - Pure tone air conduction audiometric test methods
- **ISO 389 series** - Reference zero for the calibration of audiometric equipment

South Africa

SANS 10083
SANS 10154-1

United States of America

29 CFR PART 1910.95

Australia and New Zealand

AS/NZS 1269.4

REGISTRATIONS & CERTIFICATIONS



UNITED STATES
(FDA COMPLIANT)

Registration nr: 3014337591



EUROPE
(CE CERTIFIED)

LRQ00001888/B



AUSTRALIA
(TGA CERTIFIED)

ARTG identifier: 321961

FEATURES & BENEFITS



OCCUPATIONAL HEALTH REPORTING

Advanced occupational health reports for medical and legal requirements. Saves time and paperwork.



PLH CALCULATION

Percentage of hearing loss (PLH) calculated in-app and in the cloud.



STANDARD PROTOCOLS SPECIFIED PER TERRITORY

Best practice audiometry protocols, with flexible customisation.



BASELINE AND STS REPORTING

Baseline audiogram with standard threshold shift (STS) reporting.



AMBIENT NOISE ATTENUATION

Insert earphones with ear defenders, offer superior noise attenuation equivalent to a single-wall sound booth.



RELIABILITY WARNINGS

False response count and response times referenced to normative data.



ENVIRONMENTAL NOISE WARNING

Real-time monitoring of noise to alert users of noise concerns.



SIGNATURE

Persons being tested can sign for consent on the screen using the digital interface.



MOBILE SOLUTION

Tablet-based solution offers robust portability. Advanced test results viewed in-app and in the cloud.



INTEGRATION OF VIDEO-OTOSCOPY


hearScope integrates seamlessly to include eardrum images on patient records.

Available in **English, Spanish & French***




*hearTest Occ Health can be provided in these languages on request.

HARDWARE



INSERT HARDWARE

Samsung Tab A, IP30 insert earphones, ear defenders, 500 disposable foam tips in various sizes, v3 DAC & carry case



OVER EAR HARDWARE

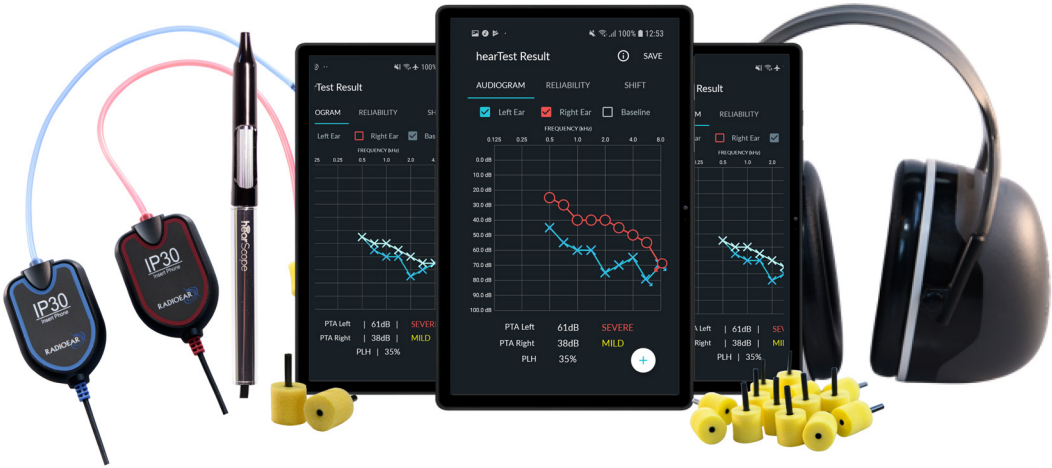
Samsung Tab A, RadioEar DD450 headphones, v3 DAC & carry case

PROTOCOLS

| | |
|-----------------------------------|---|
| Frequency range | <ul style="list-style-type: none">Insert: 125 - 8,000 HzOver ear: 125 - 16,000 Hz |
| Testing protocol | Shortened Threshold Ascending method |
| Pre-tone waiting period | Randomised between 1,500 - 4,000 ms |
| Person response window after tone | Adjustable between 1,500 - 4,000 ms |
| Optionals | Self-test / test operator mode |
| Additional features | <ul style="list-style-type: none">On-screen patient signatureAdd otoscopy images to test |

OCCUPATIONAL HEALTH PROTOCOLS PRE-PROGRAMMED AND AVAILABLE FOR SELECTION

- OSHA - Baseline and annual audiometric testing
- NAL 80 - Baseline, periodic and exit audiometry protocols
- SANS 10083 - Occupational health baseline, monitoring and exit protocol



TECHNICAL SPECIFICATIONS AND PERFORMANCE

| | |
|---|---|
| Carry case dimensions <ul style="list-style-type: none"> Includes a handle Includes a shoulder strap | <ul style="list-style-type: none"> 35 cm x 26 cm x 12 cm 13.77 inch x 10.23 inch x 4.72 inch |
| Net weight (contents: tablet, headphones, and charger) | < 1 kg |
| Shipping weight (quantity=1) | 2 kg |
| Safety and design standards | <ul style="list-style-type: none"> IEC 60645-1 IEC 60601-1-2 IEC 62304 |
| Medical device class | Class IIa |
| Degree of protection (electric shock) | Type B applied part |
| Warm up time | None |
| Protection against ingress (IP): <ul style="list-style-type: none"> Tablet Headphones | <ul style="list-style-type: none"> IP68 Not specified |
| Usage environment | Professional healthcare environment |
| Operating temperature Humidity Ambient pressure | <ul style="list-style-type: none"> 15 to 35 °C 30 to 90 %RH Non-Condensing 98 to 104 kPa |
| Shipping and storage conditions Temperature Humidity Ambient pressure | <ul style="list-style-type: none"> 0 to 30 °C 30 to 60% Non-Condensing 70 to 106 kPa |

TONE SPECIFICATIONS

| | |
|--|---|
| Type | Pure tone |
| Frequencies <i>*Headphone dependant</i> | 125, 250, 500, 750, 1000, 1,500, 2,000, 3,000, 4,000, 6,000, 8,000, 10,000, 12,500, 16,000 |
| Rise / fall time | 35 ms |
| Total harmonic distortion | <2% |
| Intensity range <i>*With DAC: From -10 dB HL</i> | Insert: 125 Hz: -10 to 80 dB HL 250 Hz: -10 to 90 dB HL 500 to 4,000 Hz: -10 to 100 dB HL 6,000 and 8,000 Hz: -10 to 80 dB HL Over ear: 125 Hz: -10 to 75 dB HL 250 Hz: -10 to 90 dB HL 750 to 4,000 Hz: -10 to 95 dB HL 6,000 and 8,000 Hz: -10 to 90 dB HL 10,000 Hz: -10 to 80 dB HL 12,500 Hz: -10 to 75 dB HL 16,000 Hz: -10 to 55 dB HL |



HEADPHONE SPECIFICATIONS

| RETSPL: (determined using an IEC 60318-1 ear simulator) | | IP30 P5011 [dB] *Referenced to 0 dB HL testing from 500 Hz and up | | DD450 [dB] *Referenced to 0 dB HL testing from 500 Hz and up | |
|---|----------------|--|--------|---|--------|
| | | Insert Insert earphones covered by 3M circumaural ear defenders | | Over ear | |
| | Frequency [Hz] | MPANL | RETSPL | MPANL | RETSPL |
| | 125 | 83 | 28 | 64 | 30.5 |
| | 250 | 70 | 17.5 | 50 | 18 |
| | 500 | 57 | 9.5 | 38 | 11 |
| | 750 | | 6 | | 6 |
| | 1,000 | 50 | 5.5 | 38 | 5.5 |
| | 1,500 | | 9.5 | | 5.5 |
| | 2,000 | 44 | 11.5 | 37 | 4.5 |
| | 3,000 | | 13 | | 2.5 |
| | 4,000 | 55 | 15 | 51 | 9.5 |
| | 6,000 | | 16 | | 17 |
| | 8,000 | 56 | 15.5 | 56 | 17.5 |
| | 10,000 | | | | 22 |
| | 12,500 | | | | 27.5 |
| | 16,000 | | | | 56 |
| | | Attenuation similar to a single-wall sound booth | | | |