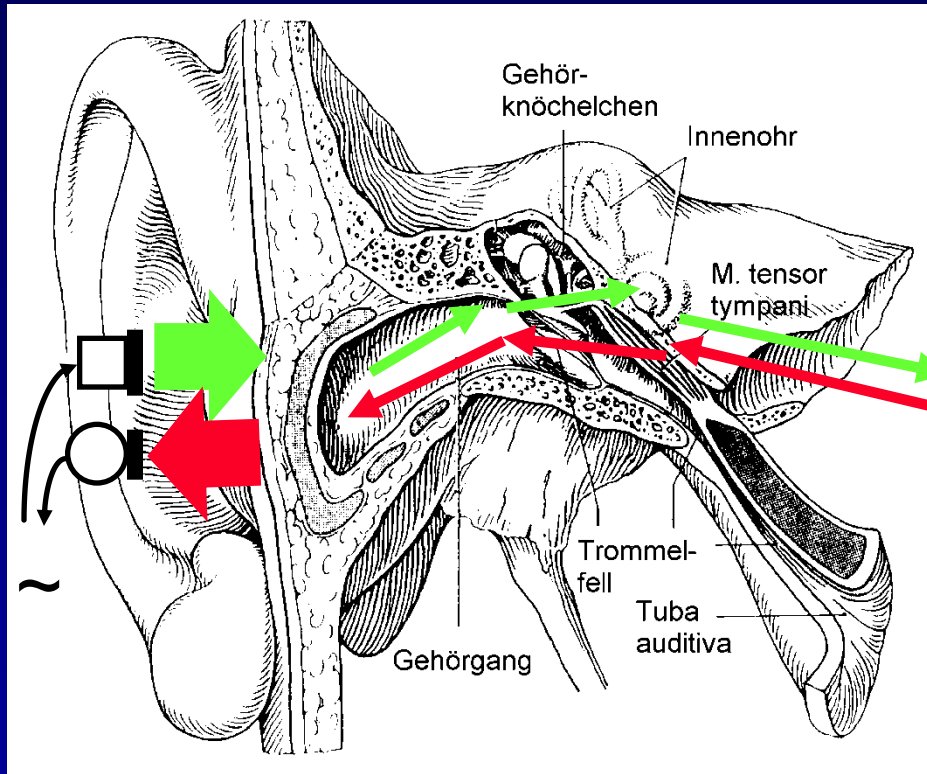


*Physiologische („objektive“)
Hörprüfungen beim Kind*

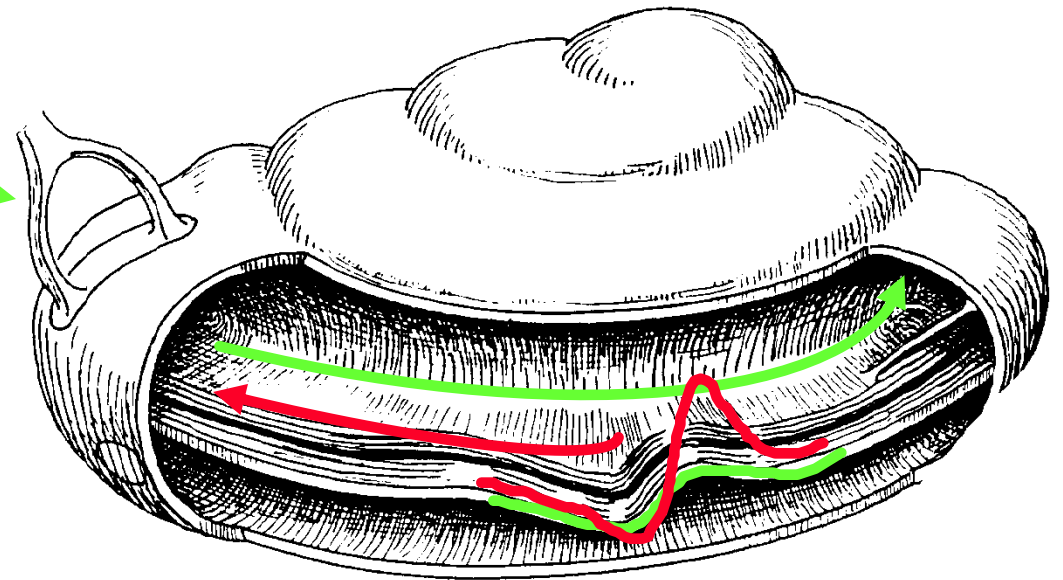
Otoakustische Emissionen

R. Schönweiler

Evozierte otoakustische Emissionen (TEOAE, DPOAE, SFOAE)

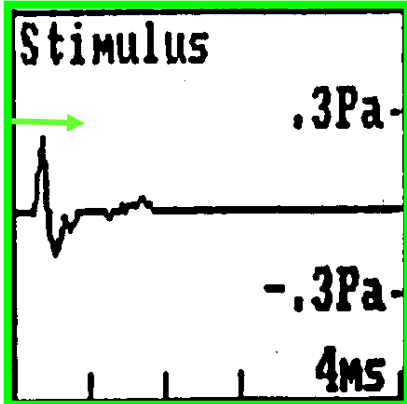


Wanderwelle, aktive Verstärkung



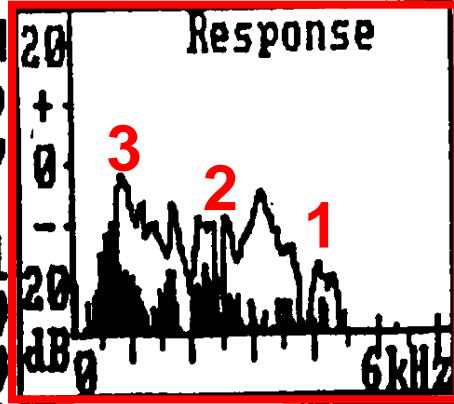
modifiziert nach Lehnhardt E: Thieme, Stuttgart (1987) p. 31

Transitorisch evozierte otoakustische Emissionen (TEOAE)

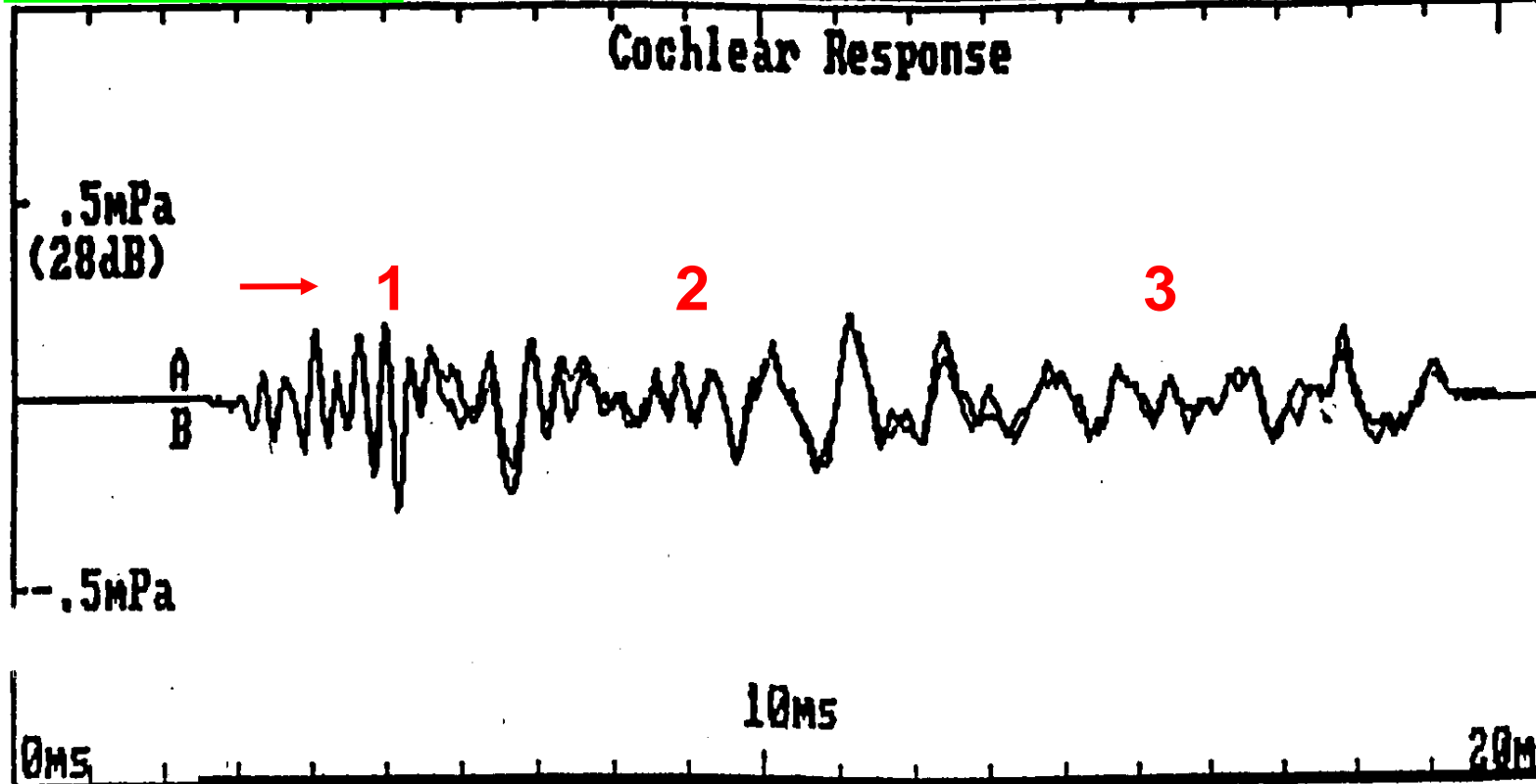


ILO88 OTODYNAMIC ANALYSER
 Patient.
 Ear.....left
 Date....16/03/1993 V2.9

Mode0 STIMULUS Gain
 NonLin CLIKN 0.0dB



NOISE
 Limit 4.6mPa
 (peak) 47.3dB
 No.Lo 260
 No.Hi 227
 %No.Lo 53%
 Level 34.3 dB



RESPONSE
 Echo 10.5 dB
 Repro 90 %
 A-B 1.1 dB

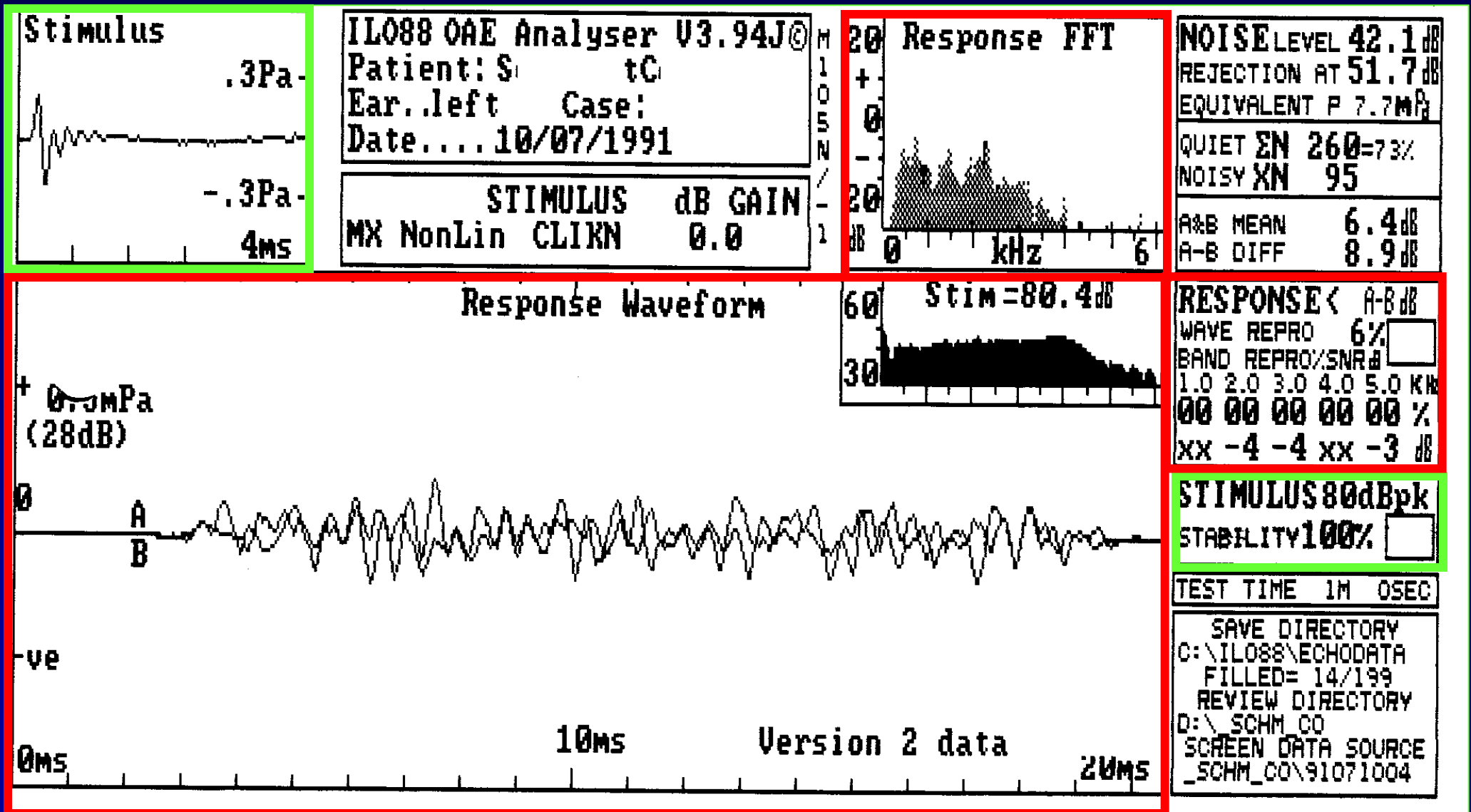
STIMULUS
 Peak 81dBspl
 Stabil 88 %

TEST TIME
 1min, 26secs

FILE NUMBER
 93031601.dta

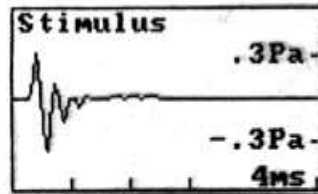
No. of files stored= 99

Pathologische TEOAE



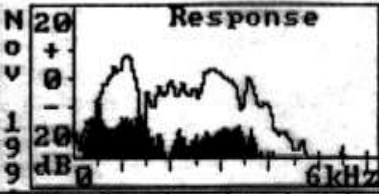
Langzeit-Reproduzierbarkeit der TEOAE

H.-E. J. ♂ * 03.06.76 rechts 0. CF



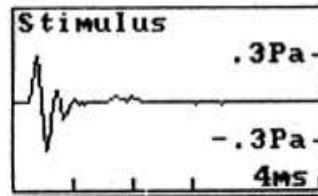
ILO88 OTODYNAMIC ANALYSER
Patient...
Ear.... left
Date... 02/03/1993 U2.9

Mode 0 STIMULUS Gain
NonLin CLIKN 0.0dB



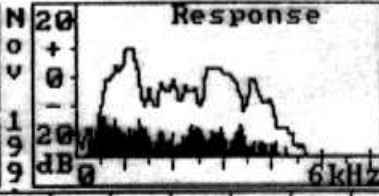
NOISE
Limit 6.1mPa
(peak) 49.8dB
No.Lo 260
No.Hi 65
%No.Lo 79%
Level 37.7 dB

Repro 36%
Stabil 97%



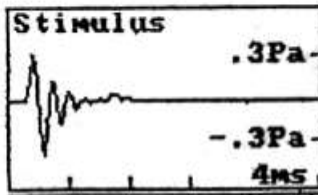
ILO88 OTODYNAMIC ANALYSER
Patient...
Ear.... right
Date... 09/03/1993 U2.9

Mode 0 STIMULUS Gain
NonLin CLIKN 0.0dB



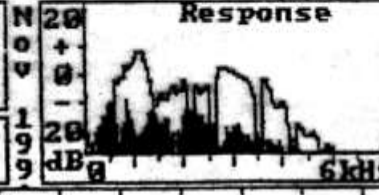
NOISE
Limit 6.1mPa
(peak) 49.8dB
No.Lo 260
No.Hi 7
%No.Lo 97%
Level 34.5 dB

Repro 38%
Stabil 95%



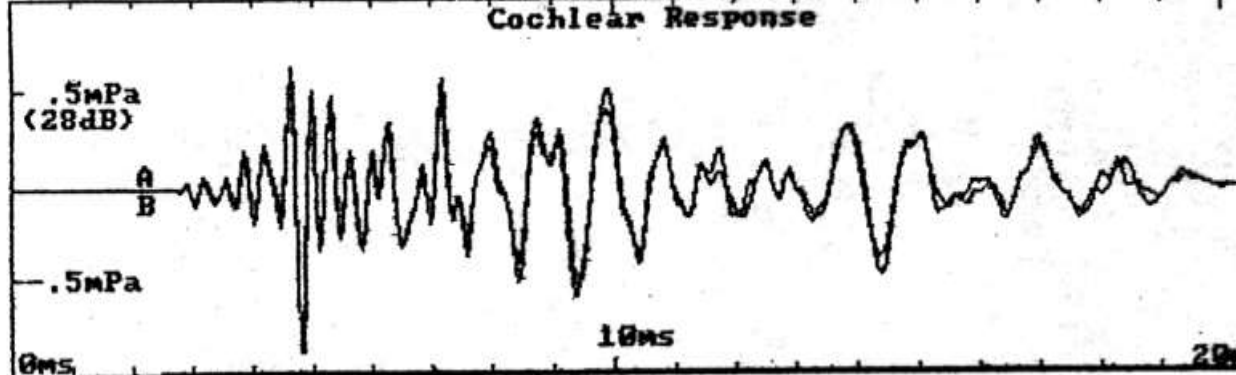
ILO88 OTODYNAMIC ANALYSER
Patient...
Ear.... right
Date... 24/05/1993 U2.9

Mode 0 STIMULUS Gain
NonLin CLIKN 0.0dB



NOISE
Limit 4.6mPa
(peak) 47.3dB
No.Lo 260
No.Hi 160
%No.Lo 61%
Level 37.8 dB

Repro 26%
Stabil 93%



RESPONSE
Echo 19.0 dB
Repro 96 %
A-B 4.6 dB

STIMULUS
Peak 85 dBspl
Stabil 93 %

TEST TIME
1min, 11secs

FILE NUMBER
93052402.dta

No. of files
stored= 157

Automatische Screening-TEOAE

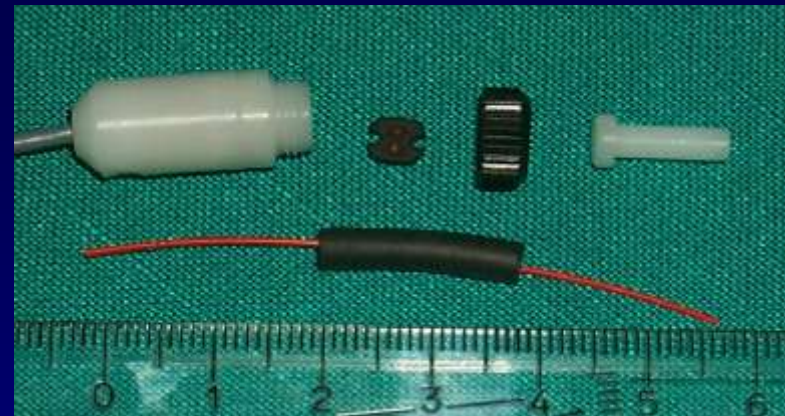
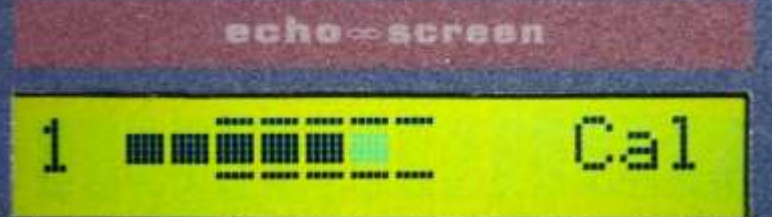


**Beispiel:
Echoscreen**

**Alternativen:
Echosensor u.a.**

Automatische Screening-TEOAE

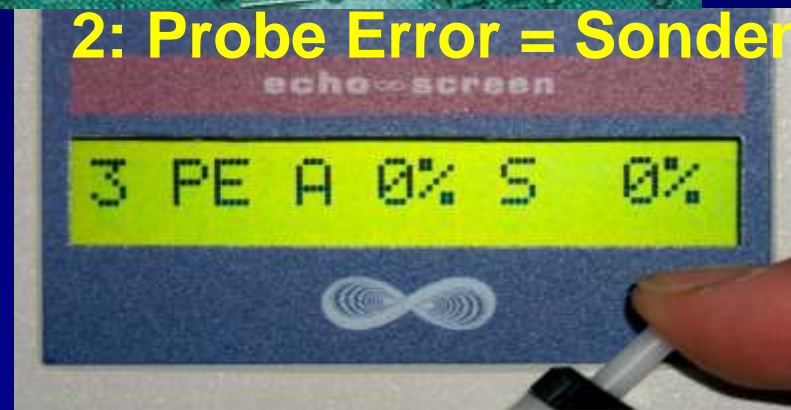
1: Kalibrieren



2: Messen



2: Probe Error = Sondenfehler



3: Messen



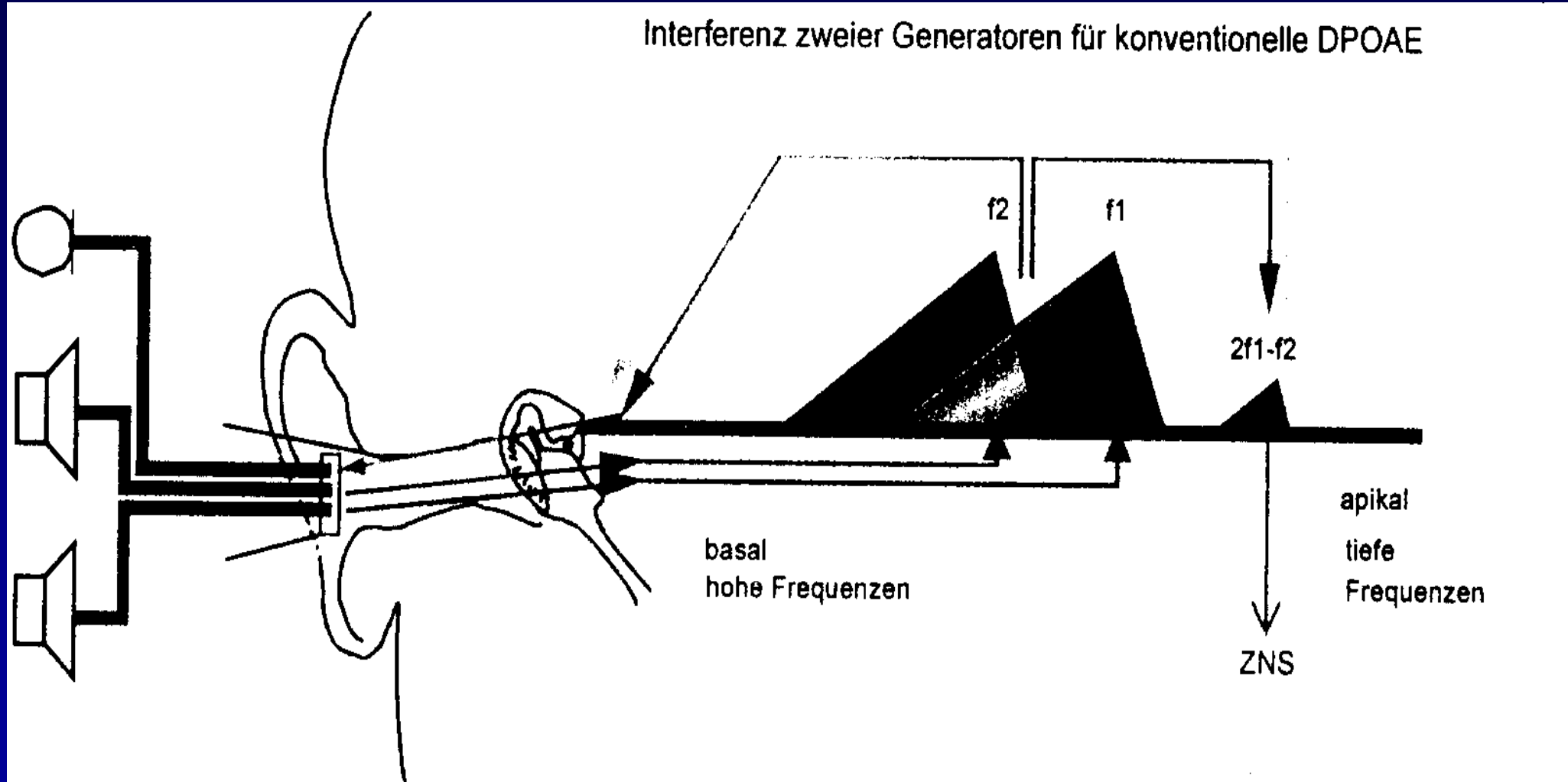
4: Pass = unauffällig



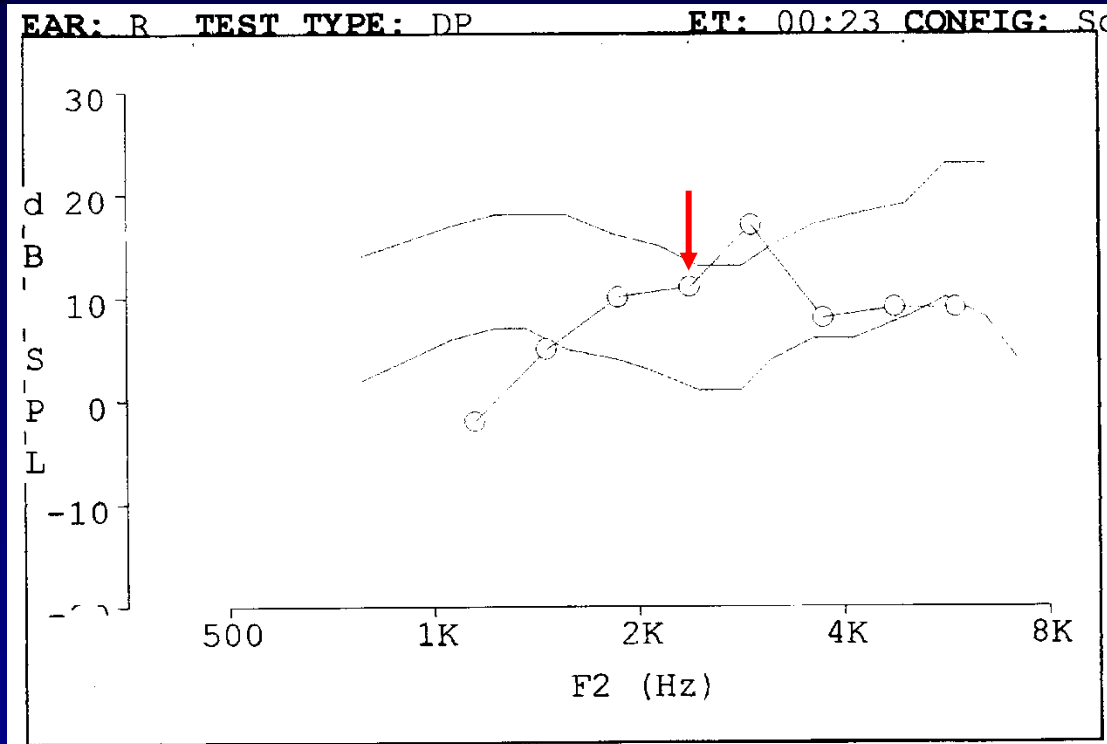
4: Fail = auffällig



Distorsionsprodukt otoakustische Emissionen (DPOAE)



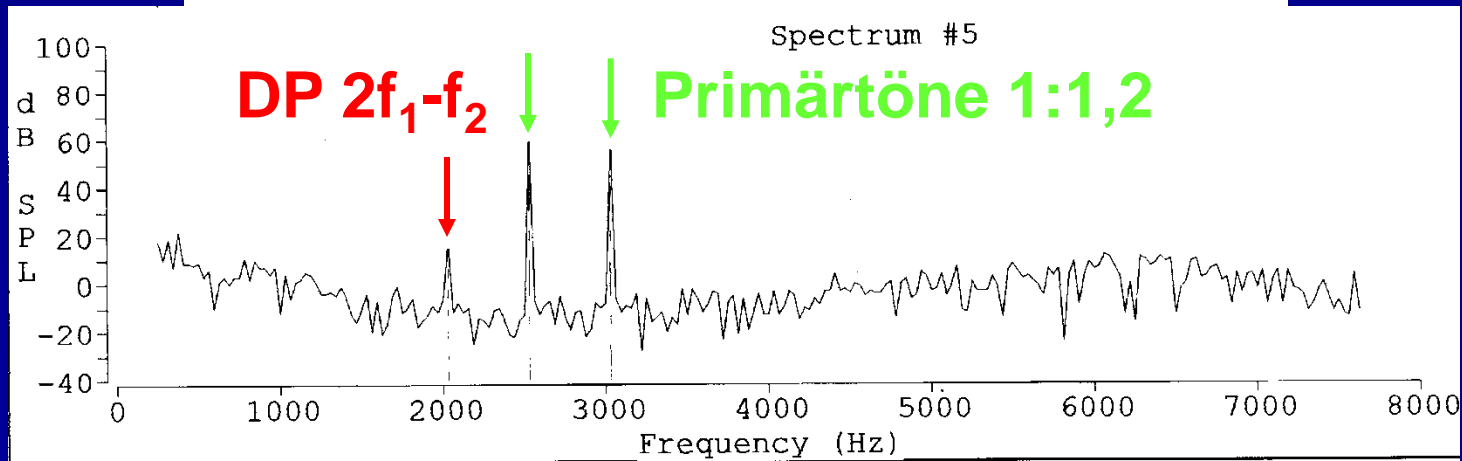
Distorsionsprodukt otoakustische Emissionen (DPOAE)



Test Result={n/a}

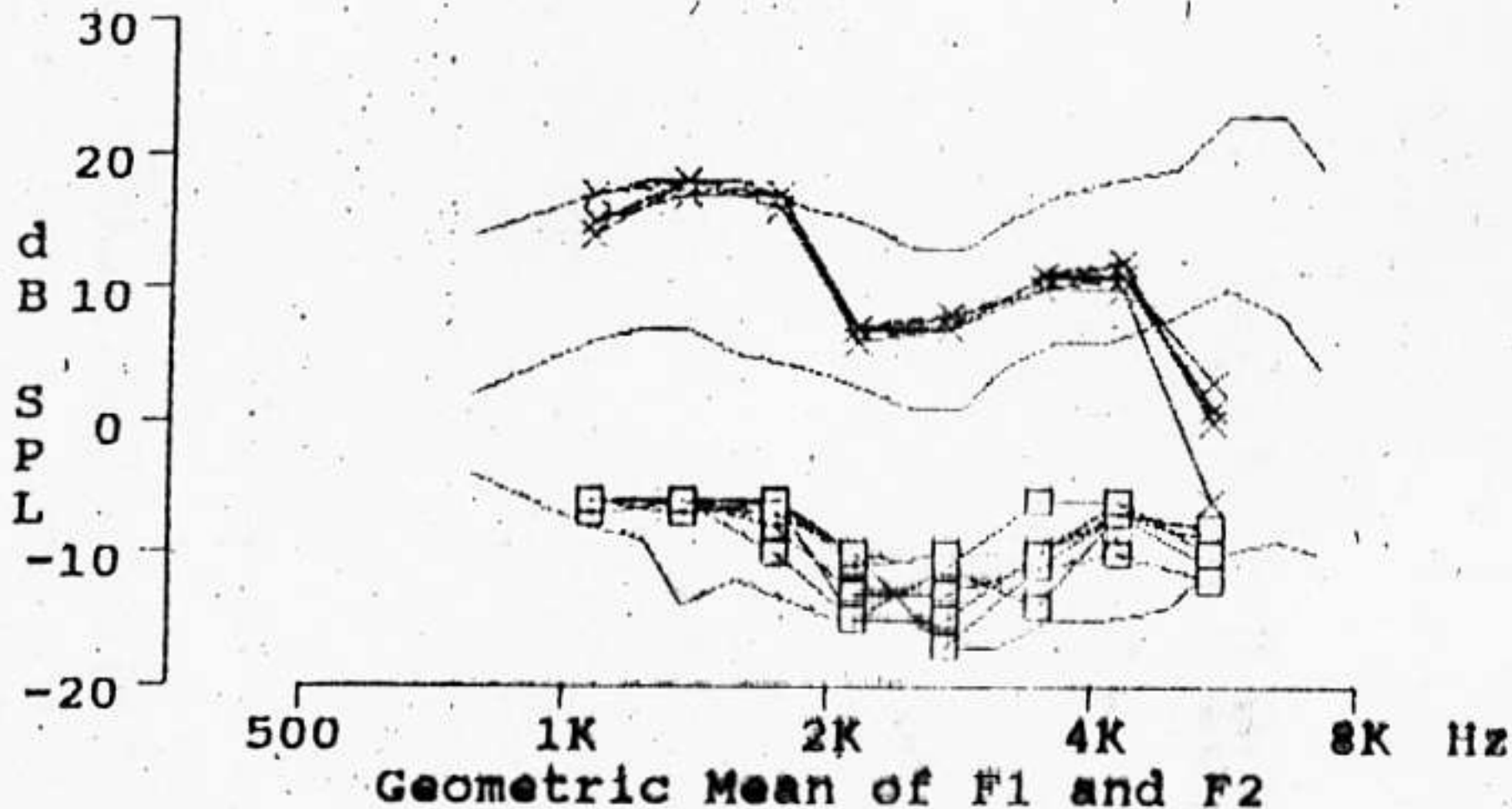
Score=(None)

NOTES:

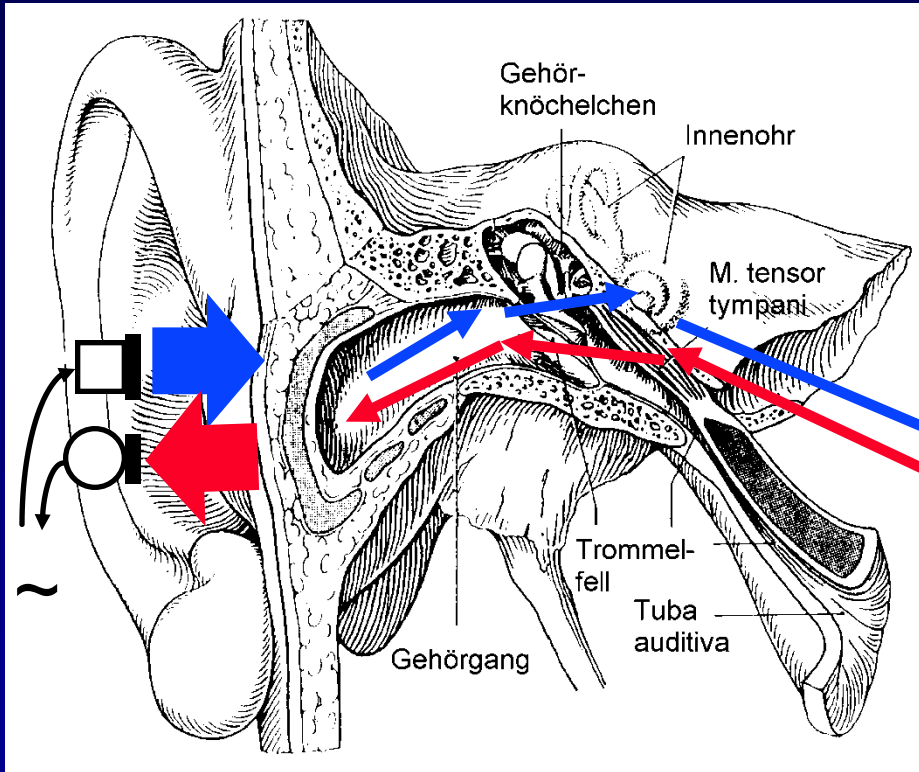


Reproduzierbarkeit der DPOAE

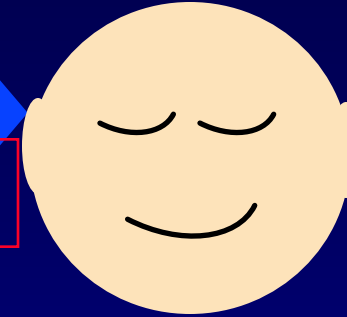
In einer Sitzung 4 mal gemessen



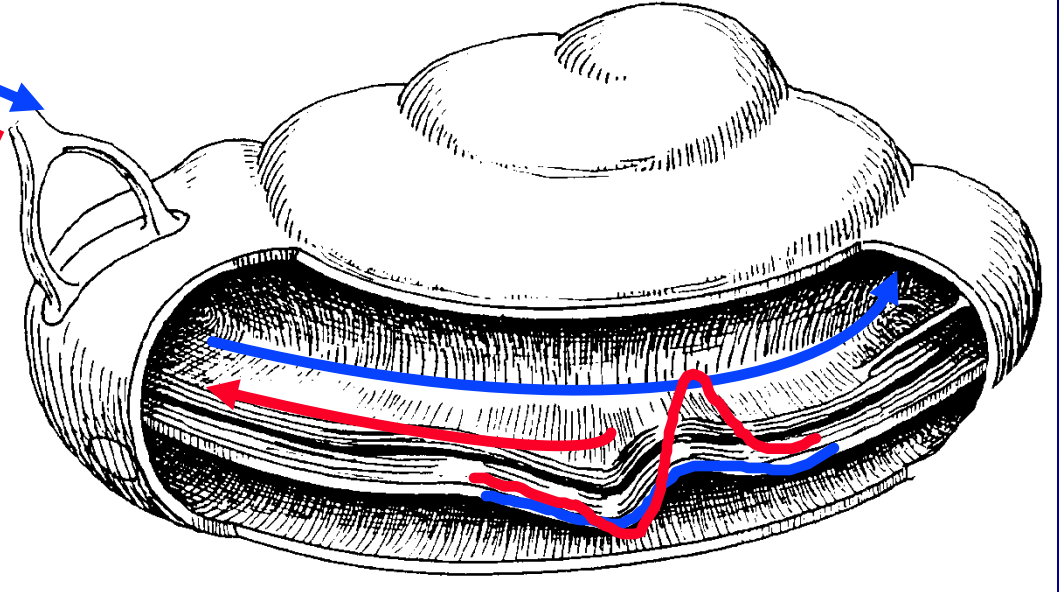
Messung der MOCS-Funktion durch kontralaterale Suppression der TEOAE



(60-) 80 dB
Prüfschall
ca. -1 dB
Emission
zw. 8-20 ms



(20-) 60 dB
Rauschen
kontralaterale
Beeinflussung



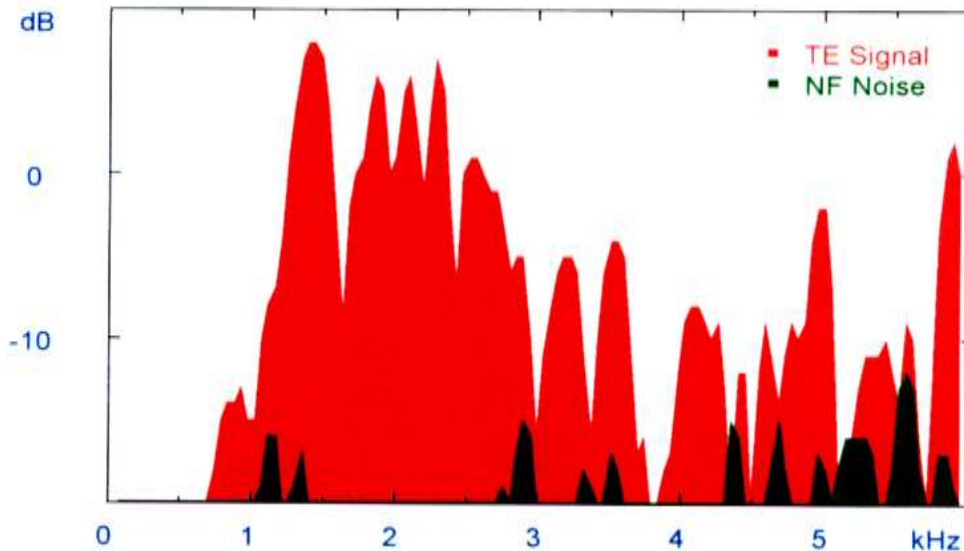
Otoakustische Emissionen

Wanderwelle, aktive Verstärkung

Messung der MOCS-Funktion durch kontralaterale Suppression der TEOAE

BIO-LOGIC OTOACOUSTIC EMISSIONS (OAE) REPORT

Patient: _____
 Birthdate: _____
 Result: PASS
 Comment: _____
 Ear: Right
 ID: _____

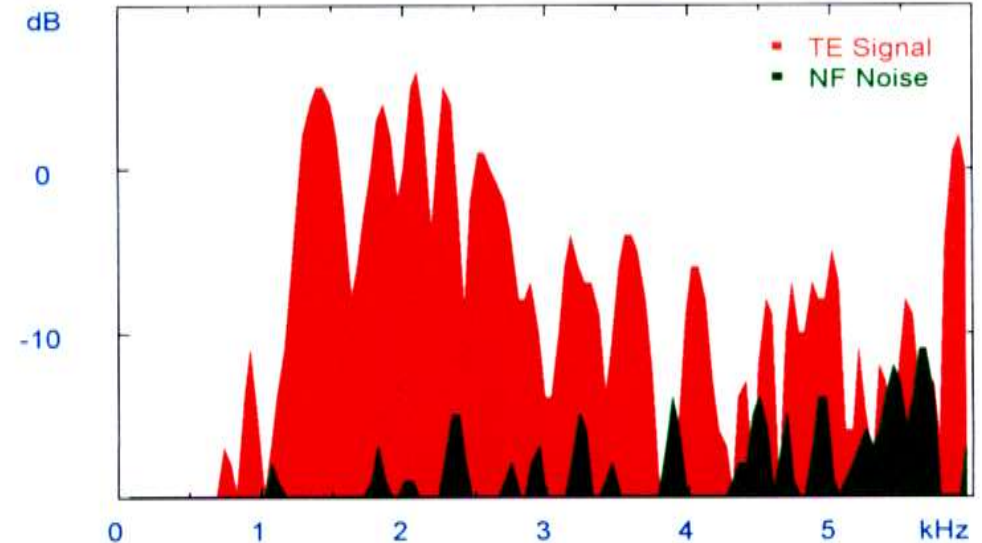


Right: 23-Feb-06: Stab:100% : TE Screen, 70% at 3/4 freq. for Pass: 06B23T14

Frq(kHz)	Repro(%)	TE(dB)	NF(dB)	TE-NF(dB)	Result
1.0	89	0.4	-8.5	8.9	-
1.5	100	14.7	-9.4	24.1	Pass
2.0	100	15.6	-7.9	23.5	Pass
3.0	95	9.7	-5.6	15.3	Pass
4.0	86	6.2	-5.0	11.2	Pass
1.2-3.5	99	18.7	-2.6	21.3	-

BIO-LOGIC OTOACOUSTIC EMISSIONS (OAE) REPORT - Page 2

Patient: _____
 Birthdate: _____
 Result: PASS
 Comment: +kontralateralem Störlärm
 Ear: Right
 ID: _____



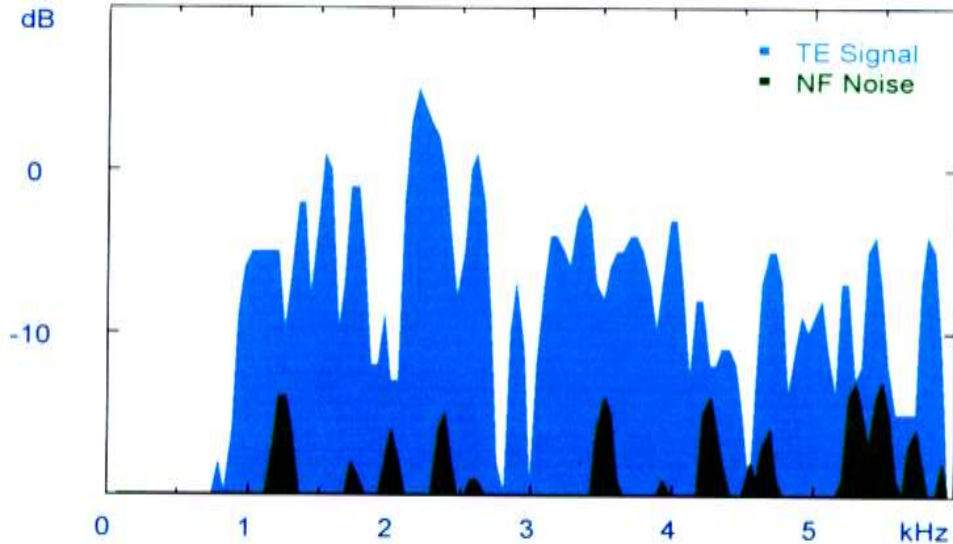
Right: 23-Feb-06: Stab:100% : TE Screen, 70% at 3/4 freq. for Pass: 06B23T14

Frq(kHz)	Repro(%)	TE(dB)	NF(dB)	TE-NF(dB)	Result
1.0	85	-2.5	-9.2	6.7	-
1.5	100	12.0	-10.0	22.0	Pass
2.0	99	14.2	-6.3	20.5	Pass
3.0	95	9.3	-5.3	14.6	Pass
4.0	79	6.0	-3.4	9.4	Pass
1.2-3.5	99	17.1	-2.0	19.1	-

Messung der MOCS-Funktion durch kontralaterale Suppression der TEOAE

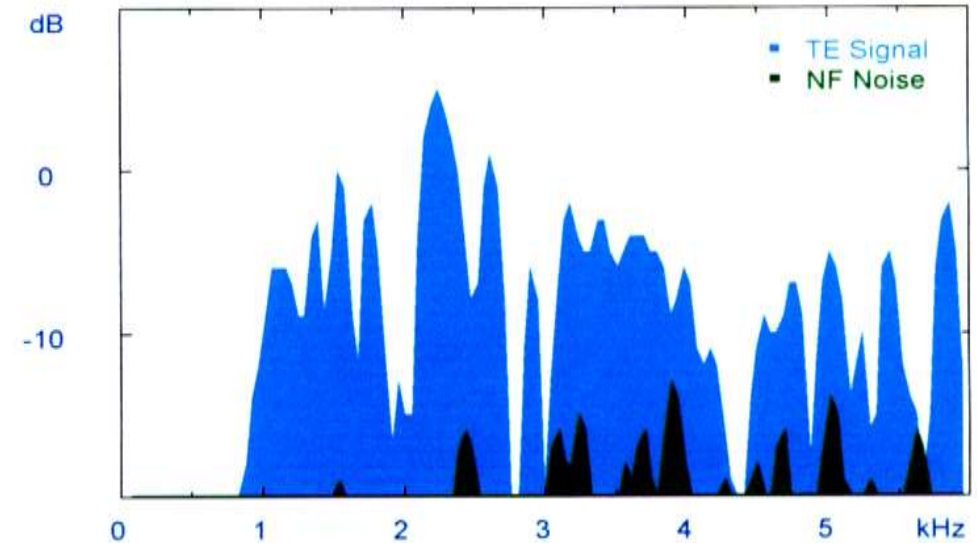
BIO-LOGIC OTOACOUSTIC EMISSIONS (OAE) REPORT

Patient:
 Birthdate:
 Result: PASS
 Comment:
 Ear: Left
 ID:



BIO-LOGIC OTOACOUSTIC EMISSIONS (OAE) REPORT - Page

Patient:
 Birthdate:
 Result: PASS
 Comment: +kontralateralem Störlärm
 Ear: Left
 ID:



Left: 23-Feb-06: Stab:100% : TE Screen, 70% at 3/4 freq. for Pass: 06B2

Frq(kHz)	Repro(%)	TE(dB)	NF(dB)	TE-NF(dB)	Result
1.0	91	3.1	-8.3	11.4	-
1.5	96	6.8	-8.3	15.1	Pass
2.0	97	11.9	-6.1	18.0	Pass
3.0	97	8.6	-6.2	14.8	Pass
4.0	89	7.7	-4.2	11.9	Pass
1.2-3.5	96	14.4	-2.0	16.4	-

Left: 23-Feb-06: Stab:100% : TE Screen, 70% at 3/4 freq. for Pass: 06B23T17.1

Frq(kHz)	Repro(%)	TE(dB)	NF(dB)	TE-NF(dB)	Result
1.0	93	0.9	-9.6	10.5	-
1.5	98	5.4	-9.9	15.3	Pass
2.0	99	11.6	-7.3	18.9	Pass
3.0	95	8.7	-5.2	13.9	Pass
4.0	85	7.1	-3.6	10.7	Pass
1.2-3.5	97	14.0	-2.3	16.3	-



Korrespondenzadresse und Urheberrecht

Prof. Dr. med. Rainer Schönweiler

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