

## **AUDIOLOGICAL EVALUATION REPORT**

Haya was seen for an audiological evaluation for purposes of assessment of her auditory status in conjunction with her interdisciplinary evaluation at KKI. No concerns were expressed regarding Haya's auditory status as she responds to speech and environmental sounds. Haya's auditory status has been evaluated previously with reportedly normal findings. Otologic history is significant for ear infections that have resolved following administration of antibiotics. Haya had an adenoidectomy in 2005. Medical history is significant for status post resection of a pilocytic astrocytoma in 8/2005 and placement of a VP shunt.

Auditory sensitivity was assessed in the sound field condition for speech and frequency specific stimuli utilizing Behavior Observation Audiometry and Visual Reinforcement Audiometry with fair reliability. Behavioral responses for BOA consisted of eye shifts, searching and eye widening. Findings indicate the presence of normal peripheral auditory sensitivity for the sound field condition. Because testing was undertaken in the sound field condition and not through earphones, findings do not allow the presence of an interaural asymmetry in sensitivity to be ruled out. Tympanometry revealed normal tympanic membrane/middle ear system mobility bilaterally, indicating the presence of normal middle ear function at this time bilaterally. Acoustic reflexes were established at normal intensity levels for ipsilateral stimulation of both ears. Measurements of transient evoked otoacoustic emissions were undertaken. TEOAEs were present for stimulation of both ears. Findings indicate the presence of normal outer hair cell function bilaterally at this time.

Peripheral auditory sensitivity is adequate for the further development of speech and language skills.

### **Recommendations:**

1. In view of these findings, there are no specific audiological recommendations at this time. Audiological re-evaluation should be undertaken if concerns arise in the future regarding Haya's auditory status.

### **Attachments**

| <b>Attachment Name</b> | <b>Description</b> |
|------------------------|--------------------|
| alyas001.PDF           | Audiogram          |

**Signature:** This visit note was electronically signed by Joseph Pillion, Ph.D., CCC-A  
State License # 00496  
**Date:** 07/10/2008 at 12:49 PM

# Audiology Department

1750 E. Fairmount Ave., Baltimore, MD 21231



Kennedy Krieger Institute

## Hearing Evaluation Report

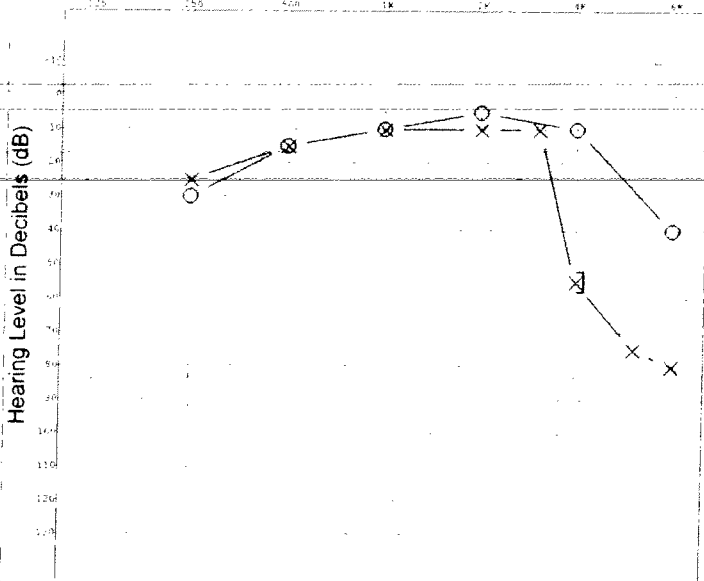
Client Name: Gibson, Samuel

Client #: 09-72-22

Birthdate: 10/2/2002

Date of Evaluation: 6/12/2008

Frequency in Hertz (Hz)



### Legend

|             | R | Binaural | L |
|-------------|---|----------|---|
| AC Unmasked | ○ |          | × |
| AC Masked   | △ |          | □ |
| bc Unmasked | ← | →        |   |
| bc Masked   | [ |          | ] |
| MCL         | M | M        | M |
| UCL         | m | m        | m |
| SF Unaided  | S | S        | S |
| SF-A Aided  | R | A        | L |

### Tympanometry (226 Hz PROBE)

|                        | R   | L   |
|------------------------|-----|-----|
| Type                   | B   | B   |
| Peak Pressure (daPa)   | -   | -   |
| Ear Canal Volume (ml)  | 4.1 | 2.7 |
| Static Compliance (ml) | -   | -   |
| Peak Height (ml)       | -   | -   |
| Gradient (daPa)        | -   | -   |

### Pure Tone Average (3Freq.)

| R  | L  |
|----|----|
| 10 | 12 |

### Pure Tone Notes

|                  |            |
|------------------|------------|
| Make/Model       | GSI-16     |
| Calibration Date | 02/08/2008 |
| Test Method      | CFA        |
| Test Reliability | Good       |
| Comments         |            |
| User Defined 1   | Headphones |
| User Defined 2   |            |

### Speech Audiometry

|          | SRT | Mask | MCL | UCL |
|----------|-----|------|-----|-----|
| R        | 10  |      |     |     |
| L        | 5   |      |     |     |
| Binaural |     |      |     |     |
| SF       |     |      |     |     |
| SF-A     |     |      |     |     |
| SF-A2    |     |      |     |     |

### Word Recognition

|          | % Stimulus | Mask | % Stimulus | Noise |
|----------|------------|------|------------|-------|
| R        | 100        | 60   |            |       |
| L        | 100        | 45   |            |       |
| Binaural |            |      |            |       |
| SF       |            |      |            |       |
| SF-A     |            |      |            |       |
| SF-A2    |            |      |            |       |

### Speech Notes

|                  |            |
|------------------|------------|
| Make/Model       | GSI-16     |
| Calibration Date | 02/08/2008 |
| Test Reliability | Good       |
| Comments         |            |
| User Defined 1   | NU-CHIPS   |
| User Defined 2   | Headphones |

### Acoustic Reflex

| Stimulus Ear    | 250 | 500 | 1000 | 2000 | 4000 | 6000 | BBN | LBN | HBN |
|-----------------|-----|-----|------|------|------|------|-----|-----|-----|
| Ipsilateral R   |     |     |      |      |      |      |     |     |     |
| Decay R         |     |     |      |      |      |      |     |     |     |
| L               |     |     |      |      |      |      |     |     |     |
| Decay L         |     |     |      |      |      |      |     |     |     |
| Contralateral R |     |     |      |      |      |      |     |     |     |
| Decay R         |     |     |      |      |      |      |     |     |     |
| L               |     |     |      |      |      |      |     |     |     |
| Decay L         |     |     |      |      |      |      |     |     |     |

CNT

### Impedance Notes

|                  |             |
|------------------|-------------|
| Make/Model       | GSI Tymstar |
| Calibration Date | 02/08/2008  |
| Comments         |             |
| User Defined 1   | CNT ARTS    |
| User Defined 2   | PE tubes AU |

### Report Comments

Signature: *George E. Wagner, AuD, CCC-A*

Date: 6/12/08

# OAE system TEOAE print

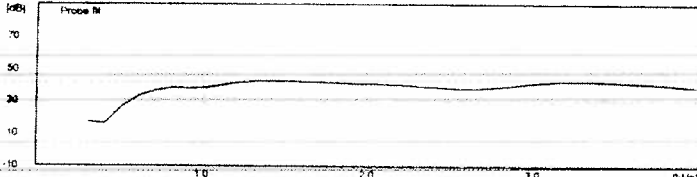
Patient data:

Client no: 09-72-22  
 First name: Samuel

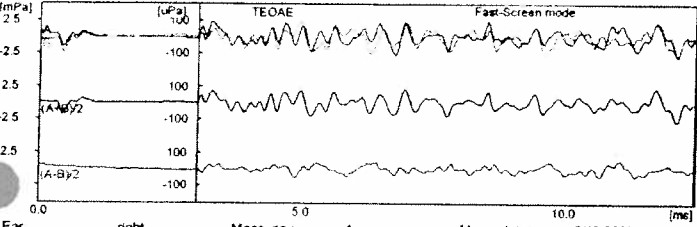
Date of creation: 4/20/2007  
 Last name: Gibson

Date of print: 6/12/2008  
 Sex: male  
 Birthday: 10/2/2002

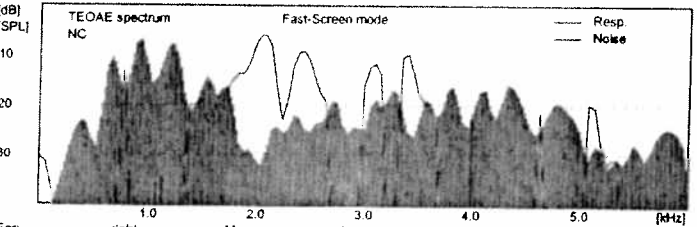
Comment:



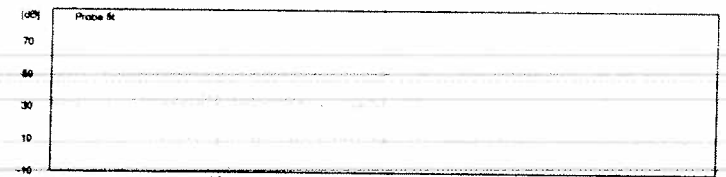
Ear: right Meas. date: 6/12/2008 Level: 80 dB



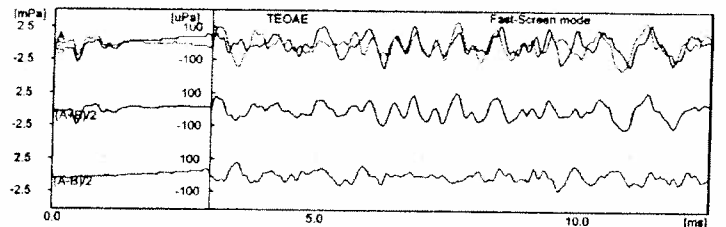
Ear: right Meas. no.: 1 Meas. date: 6/12/2008  
 Level: 80 dB (90 dB) Accepted: 2152 Correlation: 48 %  
 Mode: Fast-Screen Rejected: 3912 S/N-ratio: 4.6 dB



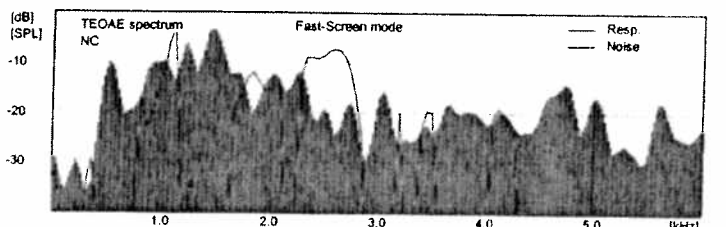
Ear: right Meas. no.: 1 Meas. date: 6/12/2008  
 Level: 80 dB (90 dB) Accepted: 2152 Correlation: 48 %  
 Mode: Fast-Screen Rejected: 3912 S/N-ratio: 4.6 dB



Ear: left Meas. date: 6/12/2008 Level: 80 dB



Ear: left Meas. no.: 1 Meas. date: 6/12/2008  
 Level: 80 dB (90 dB) Accepted: 1880 Correlation: 40 %  
 Mode: Fast-Screen Rejected: 5912 S/N-ratio: 3.7 dB



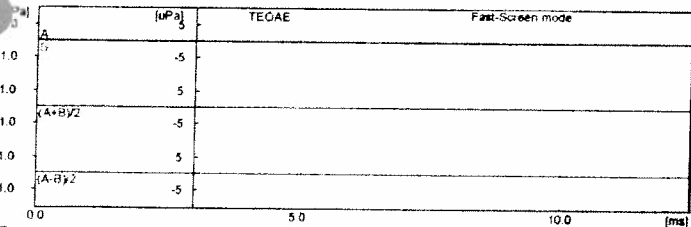
Ear: left Meas. no.: 1 Meas. date: 6/12/2008  
 Level: 80 dB (90 dB) Accepted: 1880 Correlation: 40 %  
 Mode: Fast-Screen Rejected: 5912 S/N-ratio: 3.7 dB

### TEOAE band analysis

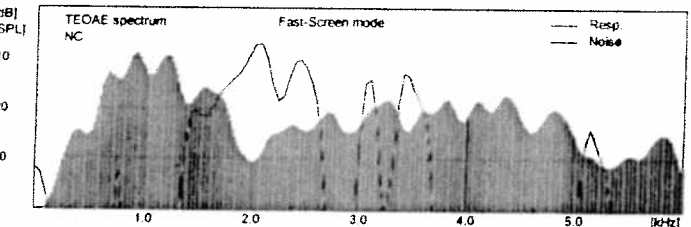
| Ear:                 | right | Meas. no.: 1 |           |           |           |           | Meas. date: | 6/12/2008 |
|----------------------|-------|--------------|-----------|-----------|-----------|-----------|-------------|-----------|
| Frequency / kHz      |       | 0.75-1.25    | 1.25-1.75 | 1.75-2.50 | 2.50-3.50 | 3.50-4.50 | Overall:    |           |
| Correlation / %      |       | -18          | 37        | 96        | 81        | -5        | 48          |           |
| Emiss. strength / dB |       | -3.7         | -5.9      | 2.0       | -1.0      | -8.7      | 5.5         |           |
| S/N-ratio / dB       |       | -1.3         | 3.4       | 17.0      | 9.5       | -0.4      | 4.6         |           |

### TEOAE band analysis

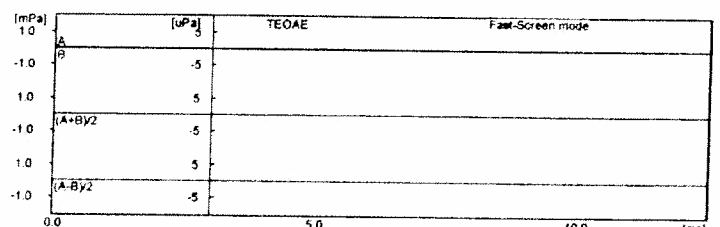
| Ear:                 | left | Meas. no.: 1 |           |           |           |           | Meas. date: | 6/12/2008 |
|----------------------|------|--------------|-----------|-----------|-----------|-----------|-------------|-----------|
| Frequency / kHz      |      | 0.75-1.25    | 1.25-1.75 | 1.75-2.50 | 2.50-3.50 | 3.50-4.50 | Overall:    |           |
| Correlation / %      |      | 61           | -3        | 67        | 80        | 27        | 40          |           |
| Emiss. strength / dB |      | 3.5          | -0.4      | 0.6       | -0.4      | -8.6      | 7.5         |           |
| S/N-ratio / dB       |      | 6.1          | -0.3      | 6.1       | 9.7       | 2.4       | 3.7         |           |



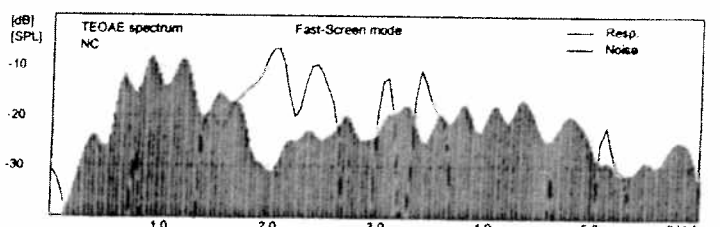
Ear: right Meas. no.: 2 Meas. date: 6/12/2008  
 Level: 80 dB (90 dB) Accepted: 2152 Correlation: 48 %  
 Mode: Fast-Screen Rejected: 3912 S/N-ratio: 4.6 dB



Ear: right Meas. no.: 2 Meas. date: 6/12/2008  
 Level: 80 dB (90 dB) Accepted: 2152 Correlation: 48 %  
 Mode: Fast-Screen Rejected: 3912 S/N-ratio: 4.6 dB



Ear: left Meas. no.: 2 Meas. date: 6/12/2008  
 Level: 80 dB (90 dB) Accepted: 1880 Correlation: 40 %  
 Mode: Fast-Screen Rejected: 5912 S/N-ratio: 3.7 dB



Ear: left Meas. no.: 2 Meas. date: 6/12/2008  
 Level: 80 dB (90 dB) Accepted: 1880 Correlation: 40 %  
 Mode: Fast-Screen Rejected: 5912 S/N-ratio: 3.7 dB

### TEOAE band analysis

| Ear:                 | right | Meas. no.: 2 |           |           |           |           | Meas. date: | 6/12/2008 |
|----------------------|-------|--------------|-----------|-----------|-----------|-----------|-------------|-----------|
| Frequency / kHz      |       | 0.75-1.25    | 1.25-1.75 | 1.75-2.50 | 2.50-3.50 | 3.50-4.50 | Overall:    |           |
| Correlation / %      |       | -18          | 37        | 96        | 81        | -5        | 48          |           |
| Emiss. strength / dB |       | -3.7         | -5.9      | 2.0       | -1.0      | -8.7      | 5.5         |           |
| S/N-ratio / dB       |       | -1.3         | 3.4       | 17.0      | 9.5       | -0.4      | 4.6         |           |

### TEOAE band analysis

| Ear:                 | left | Meas. no.: 2 |           |           |           |           | Meas. date: | 6/12/2008 |
|----------------------|------|--------------|-----------|-----------|-----------|-----------|-------------|-----------|
| Frequency / kHz      |      | 0.75-1.25    | 1.25-1.75 | 1.75-2.50 | 2.50-3.50 | 3.50-4.50 | Overall:    |           |
| Correlation / %      |      | 61           | -3        | 67        | 80        | 27        | 40          |           |
| Emiss. strength / dB |      | 3.5          | -0.4      | 0.6       | -0.4      | -8.6      | 7.5         |           |
| S/N-ratio / dB       |      | 6.1          | -0.3      | 6.1       | 9.7       | 2.4       | 3.7         |           |