ISO 8253-3:2022-01 (E)

Acoustics - Audiometric test methods - Part 3: Speech audiometry

Contents

Page

Foreword ..... **v**

Introduction ..... **vi**

1 Scope **1**

2 Normative references **1**

3 Terms and definitions **2**

4 Requirements for recording of speech material **5**
4.1 General requirements 5
4.2 Calibration signal 5
4.3 Reference recording 5
4.4 Recording environment 6
4.5 Recording setup 6
4.6 Signals and levels 6
4.6.1 Calibration signals 6
4.6.2 Speech signals 7
4.6.3 Announcing signals 7
4.6.4 Competing sound signals 7
4.7 Phonemic equivalence across test lists 7
4.8 Perceptual equivalence across test lists 7

5 Validation of speech material recordings **8**
5.1 General 8
5.2 Determination of reference speech recognition curve 8
5.3 Determination of perceptual equivalence of test lists 9
5.4 Determination of test-retest reliability 9
5.5 Documentation 9

6 Requirements for speech audiometry **10**
6.1 Audiometric equipment 10
6.2 Ambient sound pressure levels in test room for speech audiometry 10
6.3 Sound field speech audiometry 10

7 Preparation and instruction of test subject **11**
7.1 General 11
7.2 Preparation of test subject 11
7.3 Instruction of test subject 11

8 Subject's response mode **11**

9 Determination of speech detection threshold level **12**

10 Determination of speech recognition threshold level **13**

11 Determination of speech recognition scores **14**

12 Contralateral masking **14**

13 Speech audiometry with competing sound **15**
13.1 Type of competing sound 15
13.2 Presentation of competing sound 15
13.3 Speech and competing sound levels 15
13.4 Test procedure 16
13.4.1 General 16
13.4.2 Speech recognition score at fixed SNR 16
13.4.3 Speech recognition threshold level with a competing sound 16

14 Format of speech audiogram **16**
15 Measurement uncertainty **17**
16 Maintenance and calibration of equipment **17**
16.1 General 17
16.2 Stage A: Routine checking and listening tests 17
16.3 Stage B: Periodic electroacoustic tests 18
16.4 Stage C: Basic calibration tests 18
16.5 Intervals between tests 18
Annex A (informative) **Example of speech materials** **20**
Annex B (informative) **Examples of competing sound** **21**
Annex C (informative) **Typical results** **22**
Annex D (informative) **Optimization of perceptual equivalence of test lists** **26**
Annex E (informative) **Measurement uncertainty** **27**
Annex F (informative) **Determination of minimum number of subjects** **32**
Annex G (informative) **Determination of test-retest reliability** **34**
Bibliography **39**