|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test Type** | | | **Reference** | **Methodology** |
| Auditory perception resolution | Bone conduction perception | | [1-3] | pattern recognition, frequency JND |
| Temporal resolution | | [4] | 2IFC |
| [5-7] | ABX |
| Frequency resolution | | [8] | Method of limits |
| [7, 9-13] | 2IFC |
| Joint time-frequency resolution | | [14, 15] | 2IFC |
| Format discrimination | Indirect discrimination | Brain response | [12, 13, 16-25] | N/A |
| Semantic description | [16-19, 21, 25-27] | DoD, Attribute rating |
| Other (level, spatialisation, temporal resolution) | [18, 19, 24, 25, 28-30] | Method of adjustment ; Method of limits |
| Sufficient formats discrimination | Alternative Hi-Res Formats | [31] | ABX |
| [32] | AB |
| Low resolution content | [33] | AXY |
| High vs standard discrimination | Test signals | [34] | Same different |
| [35-38] | 2IFC |
| Real world content | [8, 16, 39-44] | Same different |
| [28, 45] | ABX |
| [33, 42, 46, 47] | AXY |
| [43, 48] | XY |
| [49, 50] | Multistimulus rating |

Discrimination experiments

1. Blech
2. Hamasaki
3. Jackson
4. Kanetada
5. Kanetada B
6. King
7. Marui
8. Meyer
9. Mizumachi
10. Muraoka
11. Nishiguchi
12. Nishiguchi
13. Oohashi
14. Plenge
15. Pras
16. Repp
17. Theiss A
18. Woszczyk
19. Yoshikawa

Insufficient

1. Ashihara
2. Bulla
3. Mortberg

Indirect

1. Higuchi
2. Kamada
3. Oohashi B - descriptor
4. Oohashi C - CLL
5. Oohashi D - headphones
6. Theiss B – spatial1
7. Theiss C – spatial2
8. Yoshikawa B

Check Fukushima 2014, Kuribayashi 2014

Perceived Tone evoked by Ultrasonic Complex Tone  
Ultrasonics International 93, Volume null, Issue null, Pages 635-638  
Masaru KAMADA, Kazuo TORAICHI, Norio NAKAMURA

Effect of Ultrasound to Timbre  
Ultrasonics International 93, Volume null, Issue null, Pages 639-642  
Norio NAKAMURA, Kazuo TORAICHI, Masaru KAMADA

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| --- | --- | --- | --- | --- |
| Test Type | | | **Reference** | **Methodology** |
| Auditory perception resolution | Bone conduction perception | | Lenhardt 1991 | pattern recognition, frequency JND |
| Temporal resolution | | Krumbholz 2003 | 2IFC |
| Kunchur 2007, 2008 | ABX |
| Frequency resolution | | Muraoka 1981 | Method of limits |
| Ashihara 2004, 2006, 2008, 2010 | 2IFC |
| Joint time-frequency resolution | | Oppenheim 2013, Majka 2015 | 2IFC |
| Format discrimination | Indirect discrimination | Brain response | Oohashi 1991, 2000; Yagi 2002, 2003 ; Fukushima 2014; Ashihara 2004, 2006, 2008, 2010 | N/A |
| Temporal resolution | Yoshikawa 1997 | Method of limits |
| Semantic description | Yagi 2002, 2003 ; Oohashi 1991, 2000; Higuchi 2009 | DoD, Attribute rating |
| Other (level, spatialisation, live) | Hawksford 1997 ; King 2012 ; Yagi 2002, 2003 | Method of adjustment ; Multistimulus ranking |
| Sufficient formats discrimination | Alternative Hi-Res Formats | Blech 2004 | ABX |
| Marui 2014 | AB |
| Low resolution content | Woszyck 2007 | AXY |
| High vs standard discrimination | Test signals | Plenge 1980 | Same different |
| Ashihara 2000, 2001 2003, Bulla 2015 | 2IFC |
| Real world content | Muraoka 1981; Oohashi 1991 ; Nishiguchi 2004, 2005, 2009 ; Meyer 2007; Kanetada 2013 ; Jackson 2014 | Same different |
| Theiss 1997, Pras 2010 | ABX |
| Yoshikawa 1995 ; Nishiguchi 2003, 2009 ; Woszyck 2007 | AXY |
| Kanetada 2013, Mizumachi 2015 | XY |

PDFs

|  |  |  |
| --- | --- | --- |
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