|  | All Etiologies | |  | ALS | |  | Ataxia | |  | HD | |  | PD | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | M | SD |  | M | SD |  | M | SD |  | M | SD |  | M | SD |
| All Speakers |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| VSA (kHz2) | 129.71 | 72.12 |  | 95.17 | 34.39 |  | 157.73 | 83.24 |  | 148.51 | 69.19 |  | 117.41 | 82.97 |
| Corner Disp (Hz) | 392.17 | 77.47 |  | 342.74 | 74.49 |  | 429.72 | 74.20 |  | 407.89 | 75.93 |  | 388.33 | 67.95 |
| VSAHull (kHz2) | 821.28 | 285.47 |  | 686.43 | 262.70 |  | 908.27 | 171.08 |  | 902.71 | 296.52 |  | 787.70 | 360.14 |
| VSD25 (kHz2) | 481.48 | 220.14 |  | 439.70 | 241.00 |  | 552.82 | 146.19 |  | 501.08 | 229.51 |  | 432.33 | 259.19 |
| VSD75 (kHz2) | 51.70 | 56.64 |  | 46.96 | 34.31 |  | 84.05 | 85.04 |  | 40.94 | 52.89 |  | 34.84 | 32.57 |
| Intelligibility (VAS) | 51.95 | 26.27 |  | 40.76 | 26.16 |  | 54.08 | 20.84 |  | 48.53 | 31.45 |  | 64.44 | 23.49 |
| Intelligibility (OT) | 58.47 | 23.91 |  | 47.45 | 23.70 |  | 62.02 | 20.32 |  | 56.95 | 27.58 |  | 67.46 | 22.39 |
| Female Speakers |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| VSA (kHz2) | 164.87 | 84.87 |  | 112.70 | 27.12 |  | 198.84 | 102.81 |  | 192.86 | 74.41 |  | 155.06 | 106.88 |
| Corner Disp (Hz) | 429.31 | 77.21 |  | 363.12 | 61.74 |  | 481.75 | 41.87 |  | 447.35 | 84.36 |  | 425.02 | 79.30 |
| VSAHull (kHz2) | 1,006.39 | 256.35 |  | 847.01 | 272.58 |  | 1017.76 | 175.64 |  | 1108.83 | 263.91 |  | 1051.97 | 299.53 |
| VSD25 (kHz2) | 621.50 | 203.90 |  | 601.13 | 242.53 |  | 643.60 | 132.97 |  | 645.09 | 216.34 |  | 596.20 | 267.49 |
| VSD75 (kHz2) | 62.98 | 61.75 |  | 66.48 | 36.37 |  | 101.05 | 106.35 |  | 30.90 | 29.86 |  | 53.49 | 36.86 |
| Intelligibility (VAS) | 48.41 | 31.31 |  | 27.98 | 19.70 |  | 51.33 | 28.35 |  | 50.54 | 37.95 |  | 63.81 | 34.49 |
| Intelligibility (OT) | 55.25 | 28.98 |  | 39.42 | 21.25 |  | 59.19 | 27.98 |  | 56.49 | 34.75 |  | 65.90 | 32.72 |
| Male Speakers |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| VSA (kHz2) | 94.54 | 29.54 |  | 77.65 | 34.04 |  | 116.61 | 28.13 |  | 104.16 | 17.80 |  | 79.76 | 22.88 |
| Corner Disp (Hz) | 355.03 | 58.79 |  | 322.37 | 87.38 |  | 377.70 | 62.19 |  | 368.43 | 44.32 |  | 351.64 | 27.09 |
| VSAHull (kHz2) | 636.16 | 171.51 |  | 525.85 | 128.52 |  | 798.77 | 70.90 |  | 696.58 | 148.17 |  | 523.43 | 165.87 |
| VSD25 (kHz2) | 341.46 | 128.94 |  | 278.28 | 81.91 |  | 462.05 | 99.00 |  | 357.06 | 140.93 |  | 268.45 | 111.68 |
| VSD75 (kHz2) | 40.41 | 50.03 |  | 27.43 | 19.33 |  | 67.04 | 65.11 |  | 50.97 | 71.76 |  | 16.19 | 12.59 |
| Intelligibility (VAS) | 55.49 | 20.24 |  | 53.54 | 27.26 |  | 56.83 | 12.44 |  | 46.52 | 27.83 |  | 65.06 | 7.13 |
| Intelligibility (OT) | 61.69 | 17.67 |  | 55.48 | 25.52 |  | 64.85 | 11.23 |  | 57.42 | 22.43 |  | 69.01 | 7.17 |
| *Note.* VAS = visual analog scale; OT = orthographic transcription; VSA = vowel space area; Corner Disp = corner dispersion; VSD = vowel space density; ALS = amyotrophic lateral sclerosis; Ataxia = cerebellar ataxia; HD = Huntington’s disease; PD = Parkinson's disease. | | | | | | | | | | | | | | |