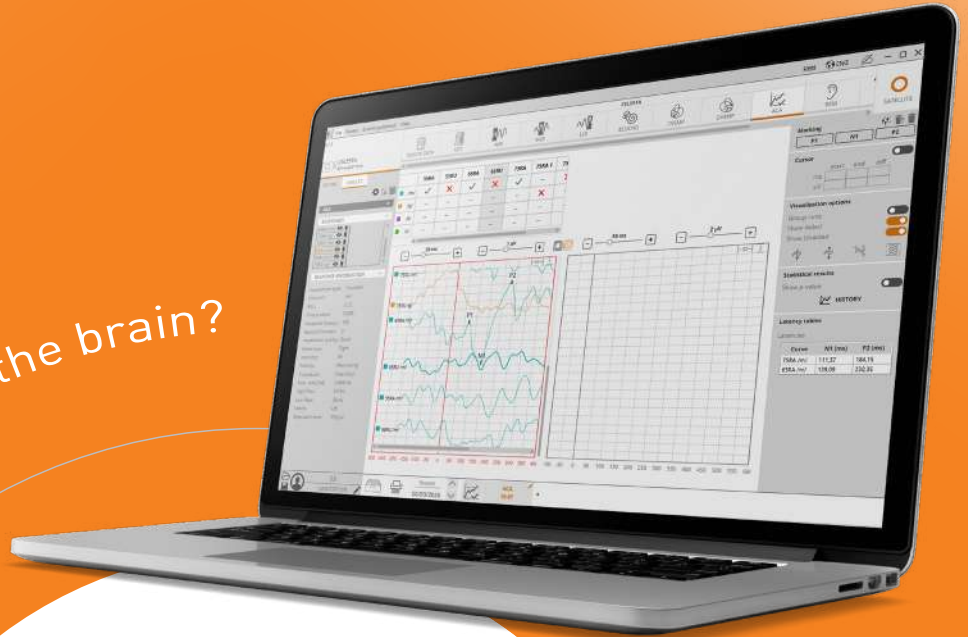


Cortical Speech Verification for Celesta

Does speech reach the brain?
ACA proves it.



Speech
signal



Hearing
Aid



Auditory
Cortex



HEARLab® ACA
detection

HEARLab® ACA (Auditory Cortical Assessment) introduces an objective method to verify whether amplified speech signals effectively reach the **auditory cortex**.

Integrated into the Celesta platform, ACA provides automated cortical response detection to speech stimuli, allowing clinicians to move hearing aid verification **from prediction to confirmation**.

The module will be available in second semester 2026 through a dedicated software licence for Celesta.



Cortical Speech Verification for Celesta **HEARLab® ACA**



Why HEARLab® ACA

Traditional hearing aid verification relies on electroacoustic measurements and predictive models based on thresholds. HEARLab® ACA provides **objective neurophysiological evidence** that speech signals are reaching the brain. This enables clinicians to verify auditory access even when behavioural feedback is limited or unreliable.

Key Benefits

- Objective verification that speech signals reach the auditory cortex
- Automated statistical detection of cortical responses ($p < 0.05$)
- Minimal training required thanks to an intuitive workflow
- Speech-based stimulation reflecting real listening conditions
- Reduced reliance on subjective waveform interpretation
- Strong support for evidence-based clinical decisions

Clinical Applications

HEARLab® ACA supports clinicians in situations where objective confirmation of auditory access is critical:

- Pediatric hearing aid fitting validation
- Auditory Neuropathy Spectrum Disorder (ANSD) assessment
- Cochlear implant candidacy evaluation
- Verification of speech audibility in complex cases
- Patients with limited behavioural responses

