



# EEG

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## **ABRET EEG LABORATORY ACCREDITATION**

### **Introduction & Standards**

#### **General Information**

The Laboratory Accreditation Boards of ABRET are separate boards functioning under ABRET, Inc., a not-for-profit, 501 (c) (6) corporation.

#### **Eligibility**

Any laboratory performing clinical EEGs interpreted by a licensed physician (M.D., D.O., or equivalent) may apply for accreditation.

At least one of the staff technologists must be an R. EEG T. or Canadian RET.

*LAB-EEG is re-examining their policies and is not accepting applications from commercial labs at this time.*

#### **Accreditation**

LAB-EEG accreditation by ABRET requires a formal review of EEG data, policies & procedures. The EEG interpretation (professional component) will not be evaluated. A site visit is not required.

Accreditation will be for 5 years.

A list of LAB of ABRET accredited laboratories will be published. Successful laboratories will receive a framed certificate.

Unsuccessful laboratories may reapply in one year.

Related or satellite EEG laboratories utilizing the same technologists may be eligible for dual accreditation at a discounted rate for the second laboratory. However, the labs must apply as a group and agree to pass or fail as a group.

## PROCESS FOR EEG LABORATORY ACCREDITATION

### *Step One*

Complete the Part I on-line application (ABRET website).

Upload a list of all staff technologists, including credential numbers, and their continuing education activities over the last 12 months. Please do not upload certificates or multi-page transcripts.

Upload a copy of the Medical Director's State Medical License.

Submit the application fee of \$75.00.

### *Step Two*

Once the initial application has been accepted, the lab will be asked to submit:

#### 1. POLICIES

Only the requested policies, electronic format preferred.

Do not include extraneous information.

Include a Table of Contents with page numbers.

#### Staff and Department Policies

- a. Staffing Policies for technical personnel (Job Descriptions/Competencies)
- b. Infection Control Policy (specific to the EEG Department)
- c. Electrical Safety (specific to the EEG Department)
- d. Quality Improvement Policy/Project (specific to EEG Department)
- e. Continuing Education Requirements for Technologists

#### Testing Procedure Policies

- a. Routine EEG
- b. Pediatric EEG
- c. Neonatal EEG
- d. Bedside EEG
- e. Sleep deprived EEG
- f. EEG for Determination of Electroencephalogram Inactivity (ECI)

#### 2. EEG RECORDINGS

Upload the five complete EEGs (No long term recordings, intraoperative recordings or ambulatory studies).

Three EEGs selected by the applicant lab, identified as Normal, Focal and Generalized.  
Two randomly selected EEGs will be requested by date.

Different technologists should have recorded the three applicant-selected records. If there are only two technologists in the lab, one may have performed two of the three recordings.

Records should be submitted 'as recorded'. A reformatted recording is not acceptable. Records must be submitted with reading software and instructions.

Records should adhere to the ACNS Guidelines. See the *Expected Technical Standards for Records* included in this document.

Patient identifying information should be removed if possible. A Business Associate Agreement has to be completed to satisfy HIPAA requirements (Use either form provided on the ABRET website or your own institutional agreement form). Data will only be used for evaluation and will be destroyed or deleted at the completion of the evaluation.

3. Accreditation Fee of \$950 (\$1000 as of 1/1/16) Checks should be payable to ABRET. Visa and MasterCard also accepted.

Applicants may contact the ABRET Executive Office after 90 days, if they have not received notification of accreditation status.

## **EXPECTED TECHNICAL STANDARDS FOR RECORDINGS**

1. All recordings must be interpretable.
2. All submitted records must have been recorded within twelve months of the application.
3. Every record must contain a minimum of sixteen channels of EEG.
4. All inter-electrode impedances (not greater than 5,000 ohms) must be documented. Pediatric impedances <10,000 ohms. Inter-electrodes impedances must be balanced within 4 kohms.
5. Required documentation: Patient Age, Date, Tech Name or ID. A unique procedure or log number should be included.
6. Required documentation: Time of Recording, Time and Date of Last Symptom or Event, Behavioral State of Patient, Medication, Summary of Relevant Medical History. Records must not contain any patient information beyond the required documentation. If all other patient information cannot be removed, a Business Associate Agreement should be entered into with the hospital. A model agreement is available upon request.
7. If meaningful square wave calibration or bio-calibration is not available, ideally the first 30 seconds of recording should be observed by the technologist from the primary system reference montage.
8. Scalp recording standards:  
Sensitivity of 5-10  $\mu\text{V/mm}$  is required, and should be adjusted as needed.  
Low frequency filter not greater than 1 Hz (time constant of .16 seconds) is required, and adjusted as needed.  
High frequency filter 70 Hz is required, and adjusted as needed.  
Digital display (paper) speed of 30mm/sec or a digital display of 10 seconds/page is required.  
The 60 Hz notch filter should be used appropriately, and not defaulted to "on".
9. Any artifacts should be corrected or monitored, as necessary.
10. A minimum of 20 minutes of artifact-free EEG activity, not including calibrations, is required.

11. At least one bipolar, and one referential montage must be recorded for a minimum of one minute each.
12. The montages must be complete and appropriate to demonstrate abnormality.
13. There should be at least one period of eye opening/eye closure.
14. Hyperventilation should be performed and acceptable with effort noted, or contraindicated.
15. Photic stimulation should be performed and acceptable, or contraindicated.
16. Adequate sleep recording should be obtained, attempted, or not needed. At least one submitted record must contain stage two (n2) sleep.
17. Visual, auditory, or somatosensory stimulation should be used and documented, as appropriate.
18. Digital display speed (paper speed), sensitivity, filters, and montages must be clearly identified on the record and at times of change.
19. The patient's state and/or level of consciousness (awake, drowsy, sleep, comatose, etc.) and any changes should be clearly noted on record.
20. Complete descriptions of patient events, movements, and tech instructions should be clearly noted on the record at the time of occurrence.
21. Clear documentation of patient's maximal level of alertness must take place at some time during recording.
22. Records must be recorded continuously without deletion of pages or demonstrate a continuous time and montage sequence as recorded. Recording on one montage and submitting a reformatted recording is not acceptable.
23. Recordings may be submitted on CD, DVD, flash drive or portable hard drives. Please send two copies. If one set is received, please note the review will take longer.
24. Before submitting data, verify it is viewable on a generic PC running Windows, and not just on your review station.
25. Verify the review software opens the recordings properly, and that the data is displayed AS RECORDED, including settings, impedances, montages, and all annotations.
26. Label each recording, identifying which are normal, focal and generalized and which were selected by ABRET.
27. Provide additional information/instructions as to how to use your particular reading software, and if there are any nuances to facilitate the process, such as passwords.

## REFERENCES

1. American Clinical Neurophysiology Society Guidelines  
([www.acns.org](http://www.acns.org))
  - a. Minimal Technical Requirements, Guideline 1
  - b. Standards of Practice in Clinical EEG, Guideline 4
  - c. Standards for Long Term Monitoring for Epilepsy, Guideline 12
2. ASET: The Neurodiagnostic Society  
([www.aset.org](http://www.aset.org))
  - a. LTME National Competencies
  - b. ICU/cEEG Competencies
  - c. Policy & Procedures for the Neurodiagnostic Department: Reference Manual
3. National Association of Epilepsy Centers, "Guidelines for Essential Services, Personnel, and Facilities in Specialized Epilepsy Centers".  
([www.naec-epilepsy.org](http://www.naec-epilepsy.org))
4. The Joint Commission, "National Patient Safety Standards"  
([www.jointcommission.org](http://www.jointcommission.org))