



Cryopreservation of Biological Materials

Edgewood Chemical Biological Center

Mission: ensure the activity, purity and secure storage for standardized DoD biological assay reagents destined for fielding.

Capabilities:

- Bio-surety cryogenic storage for >300,000 samples
- Storage supported with backup LN₂, power generation, telephone alarm system
- Production of antibodies in gram quantities
- PCR assay development and validation
- Fermentation (antigen production) up to 1500 liters available on-site
- Animal immunization and Mab development



Repository Operations 2002-2003

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- **Current inventory: 1500+ hybridomas vs. ~15 agents
gram quantities of antibodies vs 10 agents and
4 simulants**
- **Support PDM and JBAIDS**
- **Other PEO customer/collaborator support**
 - 2002 - 92 shipments out
24 shipments received**
 - 2003- 21 shipments out
12 shipments received**
- **Antibody validation- 175 validations**
- **Support for ATCC- select agent repository**
- **Support for JVAP- alternative repository**



Critical Reagent Repository

Edgewood Chemical Biological Center

- **Validates all antibody reagents**
- **Provides surge production capability**
- **Supports PEO customers and collaborators with rapid shipment of reagents**
- **Promotes standardization**
- **Cooperates with other PEO-funded efforts to optimize reagents for platforms**
- **Leverages Tech Base funding for reagent research**

R&D efforts- ongoing and future

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- **Development of capture ELISA for validation and determination of optimal capture-detector pairs**
- **Establish validation/exit criteria for all known detector molecules that may eventually exist in the CRR**
- **Determination likely conjugation chemistries for next generation detector molecules: Fab's, aptamers, scFv's, short peptides**
- **PCR Assay development and validation**