



540 Division Street, Campbell, California 95008-6906  
Tel. (408) 866-6363 Fax (408) 866-6364  
www.listlabs.com

CERTIFICATE OF ANALYSIS  
BOTULINUM NEUROTOXIN TYPE A  
from *Clostridium botulinum*  
Lot #13032A5

**Contents**

Each vial contains 100 µg of Botulinum Neurotoxin Type A in 20 mM HEPES, pH 7.4 at a concentration of 0.2 mg/ml. **Handle the product gently; mix by inversion, do not vortex.**

**Concentration**

Protein concentration was determined by absorbance at 280 nm using an extinction coefficient of 1.63<sup>1</sup> for a 1 mg/ml solution.

**Gel Electrophoresis**

When examined on 4-12% SDS-PAGE, this protein migrates as a single major band with an apparent molecular weight of approximately 150,000 daltons. In the presence of a reducing agent, the preparation migrates as two bands with apparent molecular weights of 100,000 and 50,000 daltons.

**Purity**

The non-reduced product migrates as one major band when examined by SDS-PAGE. The purity is >95%. The absorbance ratio (OD<sub>260</sub>/OD<sub>280</sub>) of this preparation is 0.6.

**Toxicity**

Toxicity testing has not been done on this lot. Botulinum toxin is the most deadly bacterial toxin known to man. The minimum lethal dose (LD<sub>100</sub>) in mice is estimated at 1.2 ng/kg, i.p. Humans are said to be at least as sensitive as mice.<sup>2</sup> Consult the SDS for further information.

**Storage**

This product is supplied as an aseptically packaged liquid. Store at 2-8°C.

(continued)

## **Handling**

Good laboratory technique should be employed in the safe handling of this product. This involves observing the following practices:

1. Persons handling this product and contaminated glassware should consult the current version of the Biosafety in Microbiological and Biomedical Laboratories.<sup>3</sup>
2. This product is to be used by skilled personnel under the direction of a principal investigator in an appropriate laboratory.
3. Wear appropriate attire, i.e., labcoat, eye protection and gloves.
4. Do not mouth pipette, inhale, ingest or allow to come into contact with open wounds. Wash thoroughly any area of the body which comes into contact with the product.
5. Avoid accidental autoinoculation by exercising extreme care when handling in conjunction with any injection device.
6. This product is intended for research purposes only. It is not intended for use in humans or as a diagnostic agent. List Biological Laboratories, Inc. is not liable for any damages resulting from the misuse or handling of this product.

**FOR RESEARCH PURPOSES ONLY. NOT FOR USE IN HUMANS.**

## **References**

1. Sathyamoorthy, V. and DasGupta, B.R. (1985) *J. Biol. Chem.* **260**, 10461-10466.
2. Gill, D.M. (1982) *Microbiol. Rev.* **46**, 86-94.
3. Biosafety in Microbiological and Biomedical Laboratories. U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Institutes of Health.

QA/QC: KPD Date: 01/22/2021