



United States Department of Agriculture

Veterinary Services

Potency Specifications for Release and Throughout- Dating

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Outline

- ▶ Background
- ▶ Considerations
- ▶ Potency Specifications
- ▶ The Power is in Your Hands
- ▶ Benefit to You (Examples)
- ▶ Practical Impacts of Draft 440

Background

- ▶ Administrative Inspection Review (2009)
- ▶ Draft Notice 440 (2011)
- ▶ Draft Memorandum 440 (2013)
 - Live products only
- ▶ Draft Memorandum 440 Revised (2014)
 - All classes of products

Considerations

- ▶ What considerations must be made when attempting to develop policy related to setting release and throughout-dating specifications for a specified dating period?

Considerations

- ▶ What is potency?
- ▶ What does it mean for a serial to be potent?
- ▶ What is the expectation of the potency of a serial at release?
- ▶ What is the expectation of the potency of a serial throughout its dating period?

Considerations

- ▶ Any policy should encourage/reward
 - Precise assays
 - Consistency in manufacturing
 - Stable products/antigens
 - More testing, not less

Potency Specifications

- ▶ What does one vial represent in terms of a serial?
 - Does the result of potency testing a single vial provide you any level of comfort regarding your expectation of a serial at release?
 - Does the result of potency testing a single vial provide you any level of comfort regarding that serial at any point throughout-dating?

The Power is in Your Hands

- ▶ Increase the precision of the assay.
 - Use a smaller dilution factor.
 - Use data from more dilutions.
 - Use more wells per dilution.
 - Consistency among operators.



The Power is in Your Hands

- ▶ Test each vial multiple times.
 - Reduces assay variance

The Power is in Your Hands

- ▶ Sloppy assays may mask/obscure potency loss.
 - May result in higher throughout–dating specification due to lack of precision in the COD data.
 - May result in closer release and throughout–dating specification but at the cost of a higher throughout–dating specification and in terms of formulation.

What is the Benefit to You

- ▶ What would you do?
 - The antigen was difficult and very expensive to produce
 - Conducting potency tests was relatively inexpensive
- ▶ What would you do?
 - The antigen was easy and inexpensive to produce
 - Conducting the potency test was relatively expensive?

Practical Implications of Draft 440

- ▶ Evaluated All Confirmation of Dating (COD) studies using a *in vitro* assay submitted after January 1, 2013
 - 46 total fractions
 - 67% had a lower release or throughout-dating specification or both under Draft 440
 - 7% showed no change to either the release or throughout-dating specification
 - 26% showed both a higher release and throughout-dating specification



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THE END