

# Kastle-Meyer Reagent

Learn how to make Kastle-Meyer reagent and use it to detect hemoglobin.

## Materials

Phenolphthalein Powder (item #879910)  
Sodium Hydroxide (25% w/v) (item #889585)  
Distilled Water (item #858621)  
Mossy Zinc (item #899340)  
Ethanol, 70% (item #861261)  
Glass Bottle (item #716292)  
Stir Bar  
Magnetic Stir Plate (item #701023)  
Erlenmeyer Flask, 100-mL (item #731028)  
Label  
Boiling Chips (item #848280)

**Don't want to make it yourself?**  
Find Kastle-Meyer reagent at Carolina.com

**Item Number**  
871300

## Procedure

1. Dissolve 0.1 g phenolphthalein in 10.0 mL of 25% sodium hydroxide solution.
2. Add 0.1 g mossy zinc to the tube. The solution should be bright pink.
3. Add a boiling chip and gently boil the solution until it changes color to become colorless or pale yellow. Add water, as necessary, to maintain the volume during boiling.
4. Allow the solution to cool. Decant the liquid and dilute it to 100 mL with 70% ethanol. Store the solution in a tightly capped blue or brown bottle.

## Label Information

### Kastle-Meyer Reagent

**Caution:** Very corrosive; be extremely cautious when handling

Date Prepared: \_\_\_\_\_

Initials of Preparer: \_\_\_\_\_

Health Risk: 3

Flammability: 0

Reactivity: 1

## Applications

Kastle-Meyer reagent is used in presumptive blood tests with hydrogen peroxide for detection of hemoglobin.

## Reference

Dunnick, J. K., and J. R. Hailey. 1996. Phenolphthalein exposure causes multiple carcinogenic effects in experimental model systems (PDF). *Cancer Research* 56 (21):4922–6. PMID 8895745.

Meyers, Thomas C. 2006. Serology. In *Forensic science and law: Investigative applications in criminal, civil, and family justice*, ed. Cyril H. Wecht and John T. Rago. Boca Raton, FL: CRC Press, pp. 410–2. ISBN 0-8493-1970-6.