

Blood Coagulant (Enzyme-Containing)

Cat. No.: C1520197 | Pack size: 100 mL / 1 L | Storage: Protected from light, room temperature

Overview

Blood Coagulant (Enzyme-Containing) is a BioReagent light yellow turbid liquid formulated with coagulation-promoting components such as diatomaceous earth, kaolin, silica powder, thrombin, silicone oil and anhydrous ethanol.

It accelerates blood coagulation, supports rapid serum separation and is intended for preparation of vacuum blood collection tubes and syringe-based blood collection tubes for medical laboratory workflows.

Key Features

- Enzyme-containing blood coagulant with thrombin and inorganic coagulation promoters
- 20 µL can rapidly coagulate 5 mL blood within 3-5 minutes at 25 °C
- Supports serum separation after standing 15-20 minutes and centrifuging at 1200-1500 x g for 8-10 minutes
- Suitable for machine spraying with continuous stirring

Product Information

Item	Description
Specifications & Purity	BioReagent
Appearance	Light yellow turbid liquid; may precipitate upon standing
Stability & Storage	Store at room temperature long term (36 months). Store in the dark. Desiccated.
Storage Conditions	Protected from light, room temperature
Shipping	Normal
Grade	BioReagent

Contents & Storage

Cat. No.	Component / Product	Size	Storage
C1520197-100mL	Blood Coagulant (Enzyme-Containing)	100 mL	RT, protect from light, desiccated
C1520197-1L	Blood Coagulant (Enzyme-Containing)	1 L	RT, protect from light, desiccated

Materials Required But Not Supplied

Item	Recommended Specification	Purpose
Personal protective equipment	Lab coat, disposable gloves and eye protection	Safe handling and contamination control
Blood collection tubes	Vacuum or syringe-based format	Tube preparation
Machine spraying system	Validated for tube additives	Coagulant application
Stirring system	Mechanical, electromagnetic or pneumatic	Maintain uniform turbid suspension
Hot-air drying system	60-70 °C	Drying after application
Centrifuge	1200-1500 x g capability	Serum separation

Preparation Before Use

1. Shake or stir thoroughly before use to obtain a uniform turbid suspension.
2. Maintain continuous stirring during machine spraying to ensure uniform addition of active ingredients.
3. If irradiation sterilization is required, use a validated process and inspect product performance after sterilization.

Protocol

Usage and Dosage

1. Apply by machine spraying while continuously stirring the turbid liquid.

2. Use mechanical, electromagnetic or pneumatic stirring; adjust stirring speed according to operating conditions.
3. After application, dry the coagulant. Hot-air drying is recommended at 60-70 °C using two sets of hot-air tubes for 3 cycles, each lasting 2 seconds, until completely dry.
4. If irradiation sterilization is required, the recommended dose is 8-25 kGy.
5. Generally, 20 µL of this product can rapidly coagulate 5 mL blood; control dosage error within +/-10%.

Coagulation and Serum Separation

1. At 25 °C, 20 µL product can coagulate 5 mL blood within 3-5 minutes.
2. After coagulation, allow the blood to stand for 15-20 minutes before centrifugation.
3. Recommended centrifugation: RCF 1200-1500 x g for 8-10 minutes.
4. If ambient temperature is below 20 °C, appropriately extend standing time after blood collection.

Blood Sample Volume	Recommended Dosage
3-4 mL	15 µL
5-7 mL	20 µL
8-15 mL	30 µL

Storage & Handling

Store as indicated on the product label: Protected from light, room temperature.

Shelf life: Store at room temperature long term (36 months). Store in the dark. Desiccated.

Safety & Precautions

1. Insufficient coagulation may cause blood cells and fibrin strands to adhere to the tube wall or cause mild hemolysis.
2. If centrifugation is performed less than 15 minutes after coagulation, secondary fibrin precipitation may occur and can block instrument probes.
3. Store sealed with ambient temperature not exceeding 35 °C. Low-temperature storage better preserves coagulation-promoting activity.
4. Wear a lab coat and disposable gloves during operation.
5. For research and validated laboratory-use workflows only.

Quality Control

QC Item	Method	Acceptable Range
Appearance	Visual inspection	Light yellow turbid liquid; redispersible after mixing.
Coagulation capacity	Whole-blood test at 25 °C	20 µL rapidly coagulates 5 mL blood within 3-5 minutes.
Serum separation	Standing and centrifugation test	Blood clot retracts well and adequate serum separates after 1200-1500 x g for 8-10 min.

Troubleshooting

Issue	Possible Causes	Corrective Action
Incomplete coagulation	Insufficient dosage, poor mixing or low ambient temperature	Verify dosage, stir continuously and extend standing time if temperature is below 20 °C.
Fibrin strands in serum	Centrifugation too soon after coagulation	Allow at least 15-20 minutes standing after coagulation before centrifugation.
Non-uniform addition	Suspension not stirred during spraying	Use continuous mechanical, electromagnetic or pneumatic stirring.
Reduced activity	Improper storage or unsealed container	Store sealed, protected from light and moisture, below 35 °C.

Recommended Applications

blood collection tube additives · rapid serum separation · vacuum blood collection tube preparation · coagulation-promoting tube workflows

Contact & Global Offices

Whether you have a technical question, need help with a quotation, or want to inquire about an order, our regional teams are ready to assist. Please contact the office for your region; for general inquiries, the North American office is the corporate primary.

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Limitations & Disclaimer

- For Research Use Only (RUO). Not for use in human or animal diagnostics, therapeutics, or in vivo applications. Not for food, cosmetic, or household use.
- This product is not a CE-marked in vitro diagnostic device under IVDR (EU) 2017/746 and is not an FDA-cleared device under 21 CFR. Use is restricted to verified businesses, institutions, and qualified professionals for research and development purposes.
- Where any kit component is classified as hazardous under CLP (EC) 1272/2008 or OSHA HCS (29 CFR 1910.1200), the product Safety Data Sheet (SDS) takes precedence over this document for handling, storage, and disposal information.
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