

BLOOD CULTURE MEDIA

IVD For In-Vitro Diagnostic and professional use only

2°C  8°C **Store at (2° to 8°C)**

Blood cultures are used to detect the presence of bacteria or fungi in the blood, to identify the type present, and to guide treatment. Testing is used to identify a blood infection (septicemia) that can lead to sepsis, a serious and life-threatening complication. Individuals with a suspected blood infection are often treated in intensive care units, so testing is often done in a hospital setting.

A bacterial infection in the blood called bacteremia. It can be serious because the blood can spread the bacteria to any part of the body. Blood infections most often occur with other serious infections such as those affecting the lungs, kidneys, bowel, gallbladder, or heart valves. Blood infections may also develop when the immune system is weak in infants and older adults, from disease (such as cancer or AIDS) or from medicines (such as corticosteroids or chemotherapy) that change the ability of your body to fight infections (immunity).

Principle:

The vials containing 25 ml or 50 ml of brain heart infusion, yeast extract, SPS and other stabilizers. The Media is used for yeast, aerobic and anaerobic organisms in blood. The principle of the test is that each type of organisms needs a certain time to grow and multiply.

Specimen:

Blood.

Reagent preparation

The vials are ready to use.

Storage:

Store reagent from (2 - 8 °C).

Procedure:

1. Bottles of Brain Heart Infusion which are not used the same day as sterilized should be placed in a boiling water bath for several minutes to remove absorbed oxygen, and cooled rapidly without shaking, just before use.
2. **Specimen collection:** Draw blood by blood collection procedure in an aseptic condition.
3. Remove the tip of the aluminum in the bottle and wipe the top with alcohol (Wipe and let dry prior to collection of specimen).
4. Sample volume:
 - 1-3 ml of blood in case of pediatric patients (25mL).
 - 3-10 ml of blood in case of adult patients (50mL).
5. Inject blood into aerobic and anaerobic bottles.
6. Shake the bottle after injecting the blood and put it in the incubator (37°C).

***NOTES:**

- It is important to obtain the correct amount of blood. An inadequate volume may lead to false negative culture while overfilling the blood culture can give a false positive result.
- Aseptic technique must be strictly followed to prevent false positive blood cultures due to bacteria present in human skin and inanimate surfaces. Laboratory data show that contamination rates are lower for blood cultures obtained from direct draw of a peripheral vein. Therefore, blood cultures should not be drawn from the central line unless ordered by the physician.

Reading results:

Daily read the result by noticing any turbidity in the bottle. Aerobic organisms turbid the upper layer of the culture while anaerobic organisms turbid the lower layer of the culture. If no growth is noticed after five days, the culture is negative.

In case the result was Positive (turbidity occurred) or not clear (not sure if the result is positive or negative): after 48 hours withdraw by a sterile needle and make sub culture on a blood agar media or chocolate media to identify the organism and make sensitivity tests.

References:

1. Madeo M, Davies D, Owen L, Wadsworth P, Johnson G, Martin C (2003). "Reduction in the contamination rate of blood cultures collected by medical staff in the accident and emergency department". *Clinical effectiveness in Nursing* 7: 30–32. doi:10.1016/s1361-9004(03)00041-4.
2. Department of Health (2007) *Saving lives: Reducing infection, delivering clean and safe care* London: DoH.
3. Donnino MW, Goyal N, Terlecki TM, et al. (September 2007). "Inadequate blood volume collected for culture: a survey of health care professionals". *Mayo Clin. Proc.* 82 (9): 1069–72. doi:10.4065/82.9.1069. PMID 17803874.
4. Madeo M, Barlow G (July 2008). "Reducing blood-culture contamination rates by the use of a 2% chlorhexidine solution applicator in acute admission units". *J. Hosp. Infect.* 69 (3): 307–9. doi:10.1016/j.jhin.2008.03.009. PMID 18511153.
5. Mimoz O, Karim A, Mercat A, et al. (December 1999). "Chlorhexidine compared with povidone-iodine as skin preparation before blood culture. A randomized, controlled trial". *Ann. Intern. Med.* 131 (11): 834–7. doi:10.7326/0003-4819-131-11-199912070-00006. PMID 10610628.
6. Shore A, Sandoe J (2008). "Blood Cultures". *Student BMJ* 16: 324–5.
7. Lee A, Mirrett S, Reller LB, Weinstein MP (November 2007). "Detection of bloodstream infections in adults: how many blood cultures are needed?". *J. Clin. Microbiol.* 45 (11): 3546–8. doi:10.1128/JCM.01555-07. PMC 2168497. PMID 17881544.
8. The OXOID MANUAL . Fifth Edition .1982 published by OXOID Limited ,Wade Road , Basingstoke Hampshire RG24 0PW Telephone National : 025661144 International : +4425661144 Telex : 858793 Telegrams : OXOID Basingstoke.

**ATLAS Medical****Ludwig-Erhard Ring 3****15827 Blankenfelde-Mahlow****Germany****Tel: +49 - 33708 – 3550 30****Email: Info@atlas-medical.com****PPI1421A01****Rev A (02.09.2019)**

	Catalogue Number		Temperature limit
	<i>In Vitro</i> diagnostic medical device		Caution
	Contains sufficient for <n> tests and Relative size		Consult instructions for use (IFU)
	Batch code		Manufacturer
	Fragile, handle with care		Use-by date
	Manufacturer fax number		Do not use if package is damaged
	Manufacturer telephone number		Date of Manufacture
	Keep away from sunlight		Keep dry