BRUCELLA MEDIUM BASE
For the cultivation of *Brucella*, *Campylobacter* and other microorganisms

**Typical formula (g/l)**
- Peptone: 10
- Beef Extract: 5
- Glucose: 10
- Sodium Chloride: 5
- Agar: 15

**Directions**
Suspend 45 g in 1000 ml of cold distilled water. Heat to boiling and autoclave at 121°C for 15 minutes. Cool to 50°C and add 5% of horse serum, inactivated by heating at 56°C for 80 minutes. To obtain a selective medium, various antibiotics and dyes can be added: the addition of 10 mg cycloheximide, 2500 I.U. bacitracin, 600 I.U. polymyxin B to 100 ml of medium is recommended. In addition, as suggested by Renoux, ethyl violet at a final concentration of 1:800,000 can be added. Brucella Medium Base may be used for the preparation of *Campylobacter* selective plating media by adding the suitable supplements: defibrinated or lysed blood, Campylobacter Growth Supplement (cat. N° 4240021), Skirrow Supplement (cat. N° 4240016) or Blaser Wang Supplement (cat. N° 4240015). See the relevant technical sheets.

Final pH 7.5 ± 0.2

**Description**
Brucella Medium Base can be used to prepare the glucose serum antibiotics medium described by Jones and Brinley Morgan, and is recommended by the WHO for the selective isolation of *Brucella*, including fastidious strains, and *Brucella abortus* type II, which is very difficult to grow on common media. *Brucella* grows on the medium, with incubation in a 10% CO₂ atmosphere at 37°C, after 3 days. However, examination of the plates is recommended on the fourth day, when the colonies have a diameter of 2-3 mm. Cultures considered negative after four days of incubation should be re-examined on the eighth and tenth day, and then eliminated. Examined in indirect sunlight, the colonies appear translucent, with a slightly amber tinge. To check that the colonies are *Brucella*, a specific antiserum agglutination test is suggested. The WHO recommends the use of thionine and basic fuchsin resistance tests to differentiate *Brucella melitensis*, *Brucella abortus* and *Brucella suis*. Prepare 0.1% solution of the dyes in distilled water and boil in water baths for one hour; add the dyes (final concentrations from 1:25,000 to 1:100,000) to the medium (with added serum) and pour into plates. Optimal working concentrations must be established using standard fuchsin and thionine. Dry the dishes with covers off by incubation at 37°C for 1-2 hours. Divide the dishes into four squares, and inoculate each quadrant with a different microbial suspension, tracing five streaks, without reloading the loop. In addition, inoculate all the suspensions to be examined onto plates without the addition of dyes. Incubate in CO₂ atmosphere for four days.

*Brucella abortus* grows in the presence of fuchsin and does not grow in the presence of thionine.
*Brucella melitensis* grows in the presence of dyes.
*Brucella suis* only grows in the presence of thionine.

Brucella Medium Base is recommended as a base medium for the preparation of the selective media for the isolation of *Campylobacter jejuni*. For media preparation see the technical sheets of *Campylobacter* Culture Media.

**Storage**
Dehydrated medium: 10-30°C

**References**

**Packaging**
4012752 Brucella Medium Base, 500 g (11 l)