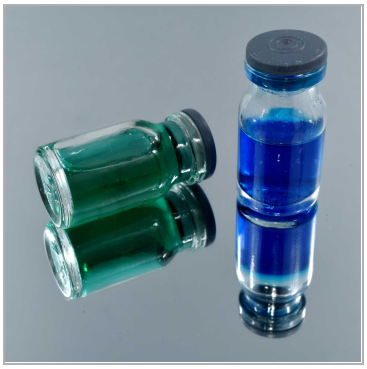

VERSION 2

FEB 06, 2023

OPEN ACCESS

Protocol Citation: Andreas Sagen 2023. Heat-inactivation of Fetal Bovine Serum (FBS). **protocols.io** https://protocols.io/view/heat-inactivation-of-fetal-bovine-serum-fbs-cnvfve3nVersion created by Andreas Sagen

Protocol status: Working
We use this protocol and it's working

Created: Feb 05, 2023

Last Modified: Feb 06, 2023

PROTOCOL integer ID: 76423

Keywords: FBS, Fetal bovine serum, Inactivation

Heat-inactivation of Fetal Bovine Serum (FBS) V.2

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ABSTRACT

The objective of heat inactivation is to destroy complement activity in the serum without affecting the growth-promoting characteristics of the product. Removal of complement activity from serum, such as fetal bovine serum, is not required for most cell cultures but may be necessary for cultures that are sensitive to the complement activity. Since heat inactivation of the serum may, to some extent, decrease the growth performance properties of the serum, this procedure should only be performed if required for optimal cell growth. Researchers should evaluate the applicability of heat inactivation regarding their own application.

GUIDELINES

Do not use heat inactivated FBS unless necessary.

MATERIALS

Circulating hot water bath
Timer
Thermometer
Ice bath

SAFETY WARNINGS

58 degrees Celsius is hot. Take care when working with these temperatures.

BEFORE START INSTRUCTIONS

Clean and sanitize everything

FBS heat-inactivation procedure

2d 3h 24m

1 Slow thaw FBS at 4 °C overnight 1d 0h 42m

> **Note**
>
> It isn't necessarily necessary to slow thaw, but FBS can form precipitation with quick thawing. This doesn't impact the quality of the FBS, but personally I would slow thaw if possible.

2 Aliquot FBS into 50 mL units in a sterile environment

> **Note**
>
> You can choose whatever volume of units to aliquot, but 50 mL is great because it gives exactly 10% FBS percentage in a 500 mL medium bottle.

3 Prepare a volumetrically equal blank container with distilled water

> **Note**
>
> A volumetrically equal blank container is necessary to control the temperature within the FBS container, and not only the external temperature of the water bath.

4 Let FBS equilibrate with the distilled water container for 00:30:00 at Room temperature 30m

5 Clean the circulating water bath. Fill with an appropriate amount distilled water. Set temperature at 56 °C

6 Set FBS aliquots and blank into preheated water bath at 56 °C for 00:30:00. Use a thermometer to track temperature in distilled water blank, and start timer when temperature reach 56 °C. Agitate aliquots every 00:05:00 to ensure homogenous heating 35m

7 Remove aliquots from heat bath, and place FBS On ice or 4 °C for 00:30:00 30m

8 Store aliquots at -20 °C until use