

# RECENT DEVELOPMENT OF MICROCARRIER FOR CELL CULTURE ENGINEERING

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# Chapter 7

## Locally Processed Serum Performance in Vero Cell Culture: Part I

*Yusilawati Ahmad Nor, Jaafar Nuhu Jaafar, Maizirwan Mel*

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### 1. Introduction

Serum is blood without cells, platelets and clotting factors (Jochems et al., 2002). Serum is normally added to culture media at a concentration of 10% to promote cell growth. When used at appropriate concentrations it supplies many defined and undefined components that have been shown to satisfy specific metabolic requirements for the culture of cells in vitro (Butler, 1996). Serum can be obtained from a range of species, such as bovine (cow), chicken, caprine (goat), equine (horse), human, ovine (sheep), porcine (pig) and rabbit sera which has been produced and tested for use in cell culture applications. The best supplementation to a culture medium is fetal bovine serum (FBS) which is most frequently used for all types of cell cultures (Paranjape, 2004) because of its availability and ease of storage (Even et al., 2006), high contents of embryonic growth promoting factors as well as low gamma-globulin content (Shah, 1999).

Fetal bovine serum is widely used for monoclonal antibody (MAb) production, inactivation and neutralization assays, tissue