



# ***TEMPORARY BUBBLE IMMERSION BIOREACTOR TE-BIB***

Used for tissue culture where the nutrient medium that is located at the bottom of the container and receives a source of air causing bubbles from this solution to migrate to the suspended levels which contain the material to be propagated.

## Technical Characteristics

### TE-BIB

- It comes with: 01 1.5L borosilicate glass bioreactor; 03 Plant tissue support screens; 01 Absolute filter of 0.20µm; Stainless steel manifold for 3 vessels ;
- Application: Plant micropropagation (tissue culture) ;
- Base: 316L stainless steel ;
- Vessel dimensions: W=18 x D=25 x H=35 cm ;
- Air entrance: Via 316L stainless steel porous filter ;
- Closure: Via quick-closing clamp ;
- Air filter: 0.20µm ;
- Material: Borosilicate glass and 316L stainless steel ;
- Number of levels: 3;
- Number of explants: 15 - 20 per tier ;
- Cover: Glass with a GL18 outlet and spike nozzle for chemical filter ;
- Bioreactor type: Temporary bubble immersion ;
- Vessel volume: 1.5L ;

## Benefits and Advantages

- Increases root and foliar biomass productivity compared to traditional methods
- Decreases production costs when compared to traditional systems such as cultivation in glass flasks
- The compartmentalized model of the bioreactor coherently describes the hydrodynamics of the system
- In the case of eucalyptus it may result in a lower occurrence of 'vitrification' of the plants
- The bubble immersion bioreactor (B.I.B.®) developed and patented by Soccol et al. (2008) is a viable and effective alternative in the production of seedlings and secondary metabolites being able to work with several stages considerably increasing its production capacity
- As the plant does not remain submerged some side effects are reduced when compared to the temporary immersion method another advantage is the optimization of the use of the culture medium
- Vitrification: According to Ziv (1991) vitrification is a common event in tissue culture generating physiological and morphological abnormalities in plant tissue. These disorders occur mainly in leaves affecting the two main processes: photosynthesis and gas exchange (CO<sub>2</sub> H<sub>2</sub>O and steam).

## Related Products

