

AIM-LB Broth w/o Trace elements**G140**

AIM-LB Broth w/o Trace elements is used to grow IPTG-inducible expression in bacterial strains.

Composition :**

Ingredients	Grams/Liter
Tryptone	10
Yeast Extract	5
Ammonium sulphate [(NH ₄) ₂ SO ₄]	3.3
KH ₂ PO ₄	6.8
Na ₂ HPO ₄	7.1
Glucose	0.5
Lactose	2.0
MgSO ₄	0.15

Directions :

Suspend 34.85 gram powdered medium in 1 liter distilled water. Sterilize by autoclaving at 10 lbs pressure (115°C) for 20 minutes. Mix well and dispense as desired.

Principle and Interpretation :

Auto Induction Media (AIM) was first formulated and developed by W. studier (1) to grow IPTG-inducible expression strains. The principle of AIM is based on carbon sources in the medium that are metabolized differentially to promote high density cell growth and automatically induce protein expression from lac promoters. AIM contains both glucose and lactose as the carbon source. A limited concentration of glucose is metabolized preferentially during growth, which prevents uptake of lactose until the glucose is depleted, usually in mid to late log phase. As the glucose is depleted, lactose can be taken up and converted by β -galactosidase to the inducer allolactose. Allolactose causes release of lac repressor from its specific binding sites in the DNA and thereby

