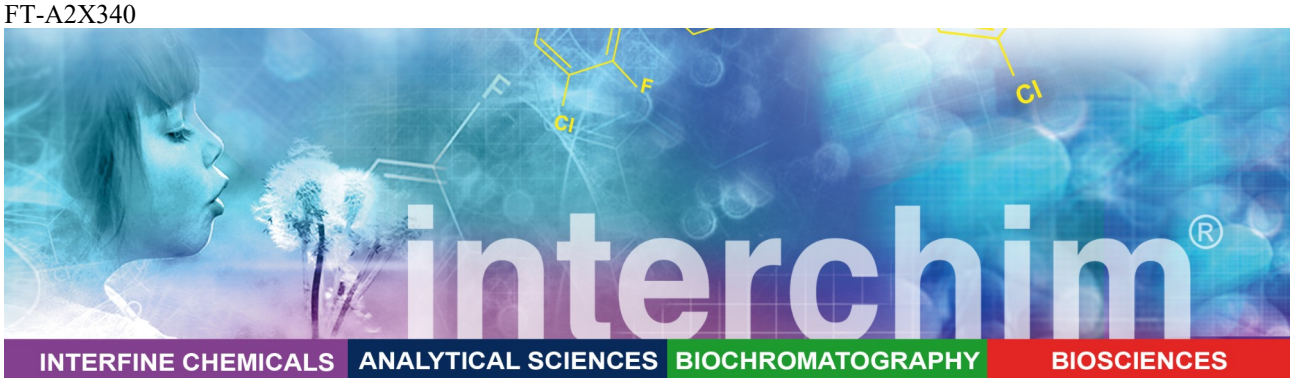
FT-A2X340



2YT Autoinducible Growth Medium with Trace Elements

To grow IPTG inducible expression in bacterial strains

Product Description

Name : **2YT Autoinducible Growth Medium with Trace Elements**

Catalog Number : A2X340, 500 g

Formula in g/l :

Glucose	0.5	Ammonium sulfate	3.3
Disodium phosphate	7.1	Magnesium sulfate	0.15
Monopotassium phosphate	6.8	Tryptone	16
Yeast extract	10	Trace elements	0.015
Alpha lactose	2		

Final pH 7.0 ± 0.2 at 25°C

Storage 2-25°C. Once opened keep powdered medium closed to avoid hydration.

Directions for use

Principles and uses

Auto induction media was first formulated and developed by W. Studier to grow IPTG-inducible expression strains. The principle of auto induction media 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.

Auto induction media contains glucose as well as 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 the enzyme ß-galactosidase to the inducer allolactose. Allolactose causes the release of lac repressor from its specific binding sites in the DNA and thereby induces expression of T7 RNA polymerase from the lacUV5 promoter and unblocks T7lac promoters, allowing expression of target proteins by T7 RNA polymerase.

With Auto induction media, a high density cell growth is followed by a spontaneous induction of protein expression. There is no need to monitor the cell density and there is no conventional induction with IPTG. Parallel growth of many non-induced or auto-induced cultures is feasible because cultures are simply inoculated and grown to saturation. This is a great convenience and simplifies manual or automated induction and analysis of multiple clones compared to conventional IPTG induction, which requires monitoring growth of each culture and adding inducer at the proper stage of growth.

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Preparation

Suspend 45,86 grams of the medium in one liter of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. Sterilize in autoclave at 115ºC for 20 minutes. Mix well and dispense into appropriate containers.

Guidelines for use

- Consult appropriate references for recommended test procedures.
- Incubate at a temperature of 35±2 ºC for 18-48 hours.

Microbiological test

The following results were obtained in the performance of the medium from type cultures after incubation at a temperature of 35 ± 2°C and observed after 18 - 48 hours.

Microorganisms		**Growth**
Escherichia coli	ATCC 23724	Good
Escherichia coli	ATCC 33694	Good
Escherichia coli	ATCC 33849	Good
Escherichia coli	ATCC 39403	Good
Escherichia coli	ATCC 47014	Good

References

Studier, F. W. Protein production by auto-induction in high-density shaking cultures. *Protein expression and purification* 41: 207-234 (2005)

Ordering information

Catalog size quantities and prices may be found at http://www.interchim.com.

For any information, please ask : Uptima / Interchim; Hotline : +33(0)4 70 03 73 06

Order on-line or Contact your local distributor