

Safe Fruit Ripening Technology

Technology summary:

Non toxic safe method to produce natural ethylene in order to induce natural ripening process of fruits harvested at optimum maturity.

Technology overview:

Ethrel or Ethaphone, 2-Chloroethylphosphonic acid, is the artificial ripening agent. By adding a base compound like Sodium Hydroxide (NaOH) to a mixture of ethaphone and water, ethylene gas can be produced. A mixture of 2.5 mL of ethaphone, 1.25 g of Sodium Hydroxide and 20 mL of water are sufficient to ripen 2000 kg of mature 'Ambul' banana.

Potential application:

The technology can be used to ripen fruits belonging to the climacteric group (tomato, mango, banana, papaya, apple etc.) This group of fruits show increase in respiration which coincides with ripening (climacteric rise) and produces a large amount of ethylene during the ripening process. Therefore, ethylene applied at a lower concentration is sufficient to induce ripening

Advantages of controlled ripening:

- Reduces post harvest losses during transportation
- Uniformity of ripening among fruits
- Minimizes the development of rots in ripe fruits
- Can be supplied to the market according to a predetermined schedule
- No contact of chemicals with fruits, therefore safe and cheap

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