



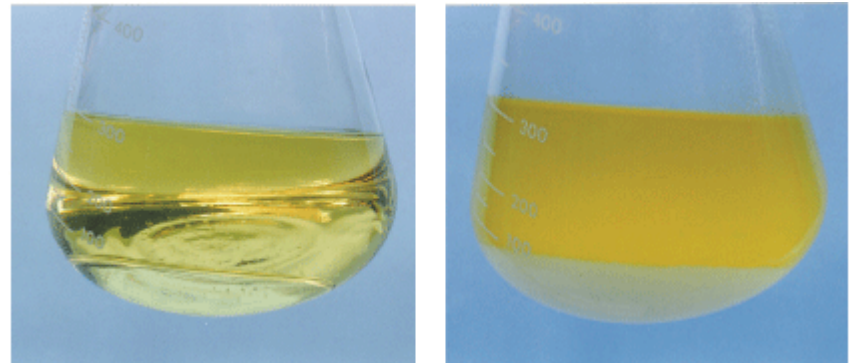
Phase Separation: Water Ingress

Phase Separation

Fuel Quality Concerns

- Occurs when water level reaches ~0.5% volume of blend (60° F)
 - Water tolerance less in cold weather
- Ethanol migrates to lower water phase, gasoline migrates to top
- Phase separated material is treated as hazardous material

Water Layer on Bottom



Phase Separation Correction

- Recommend removal and disposal of affected fuel
- Correct system failure that caused water introduction
- In few cases, product may be salvaged, verify fuel quality and ethanol content
 - In ground product may need to be upgraded
 - Octane
 - Vapor Pressure
 - Other possible quality concerns such as gums and particulate
- Verify State regulatory procedures

Phase Separation Prevention

- Housekeeping is key!
 - Keep system in good working condition
- Continuously check for water introduction using alcohol compatible water finding paste
 - Train personnel to recognize phase separation
 - Some water detection equipment may not detect water introduction with ethanol blended fuels
- Install water slug filters if water is an ongoing concern

One Massachusetts Avenue NW, Suite 820 Washington, DC 20001

P: 202.289.3835 | www.EthanolRFA.org | F: 202.289.7519

