



# Applying ASTM International Standards to Support Environmentally Friendly Fuels



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# The Challenge

A growing demand for energy, and:

- Shrinking natural resources
- Climate change concerns
- 95% of the world's transportation fuel comes from petroleum

Is it possible to identify fuel options that are:

- Safe
- Dependable
- Reliable
- Replicable





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## The Standards

- Five ASTM International standards for denatured ethanol fuel and biodiesel ethanol fuel stock
  - ✓ Flexible in terms of feedstock source
  - ✓ Adaptable to local circumstances
  - ✓ Technically sound, market relevant
- Allows for development of alternative fuels that are
  - ✓ Innovative
  - ✓ Economical
  - ✓ Environmentally sound



# How the Standards Helped ZERA

ASTM International MoU allows partner NSBs to adopt, reference, or use ASTM as the basis of national standards

- Supported mandatory blending of unleaded petrol with ethanol.
- ASTM D4806 adopted to allow a quality check of ethanol used for mandatory blending
- The denatured ethanol standard is referenced in 2013 Statutory Instrument 17
  - ✓ Supports Zimbabwe's energy security
  - ✓ Reduces fuel imports
  - ✓ Enhances fuel quality
  - ✓ Reduces fuel emissions



D02

ASTM standards have been adopted, used as a reference, or used as the basis of national standards in over 40 nations

# How the Standards Helped INACAL

ASTM Standard D4814 referenced and used as a basis, along with other standards,

- Supported development of NTP 321.102:20 *Petroleum and Derivatives, Gasoline Motor Use, Specifications*, 2nd edition
- ASTM D4814 used in the previous edition of NTP 321.102

Aided the Peruvian government's effort to:

- Establish new specifications for motor gasolines
- Incorporate new national requirements for lower levels of lead and sulphur
- Accelerate development of a solution by providing technically sound foundation for the NTP

2,500+

global ASTM members  
in over 70 countries  
participating in ASTM  
D02 technical committee



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# Lessons Learned

- Standards help to evaluate and confirm alternative fuels which are
  - ✓ Safe
  - ✓ Innovative
  - ✓ Environmentally friendly
  - ✓ Commercially viable
- Standards support regulatory and market needs
- Standards accelerate the development and application of solutions



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# Thank you!



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