



**ASSOCIAÇÃO  
BRASILEIRA  
DE NORMAS  
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# **ABNT**

## **The Brazilian National Standardization Body**

**Overview of the standards used in Bioethanol  
Supply Chain**  
July/2007



# ABNT work on Bioethanol

## Brazilian Committees on the supply chain of Biofuels

→ **ABNT/TC-04: Machines and mechanical equipment**

**Engines;**

→ **ABNT/TC-05: Automotive**

**Engines;**

→ **ABNT/TC-16: Transports and traffic**

**Transportation of dangerous products;**

→ **ABNT/TC-34: Petroleum**

**Service station and storage of flammable and combustible liquids**



# ABNT work on Bioethanol

## Brazilian Committees on the supply chain of Biofuels

### → ABNT/TC-43: Corrosion

Evaluation of the impact of corrosion and storage impacts;

### → ABNT/PC for Forest management

Forest management and chain of custody assessment;

### → ABNT/PC for Alcohol

Fuel ethylic alcohol standardization



# ABNT work on Bioethanol

## ABNT/TC-04: Machines and mechanical equipment

- ➔ **ABNT NBR 7820 – Safety on the production sites, storage, handling and transport of ethanol (fuel ethylic alcohol)**

## ABNT/TC-05: Automobile

- ➔ **ABNT NBR 9184 – Gasoline and alcohol filter – Determination of characteristics**
- ➔ **ABNT NBR 9297 – Alternative engines for vehicle internal combustion with FEHA (fuel ethylic hydrated alcohol)**



## ABNT/TC-16: Transports and traffic

- **ABNT NBR 11564 - Dangerous goods packaging - Classes 1,3,4,5,6, and 9 - Requirements and test methods**
- **ABNT NBR 12982 - Gasfree of the bulk lorries for dangerous goods Class 3 - Flammable liquids – Procedure**
- **ABNT NBR 14064 - Emergency response in the road transportation of dangerous goods**
- **ABNT NBR 14095 - Parking area for road trucks transporting dangerous goods**
- **ABNT NBR 14619 - Dangerous goods transportation - Chemical incompatibility**
- **ABNT NBR 15054 - Intermediate bulk container (IBC) for dangerous goods**



## ABNT/TC-16: Transports and traffic (cont.)

- ➔ **ABNT NBR 11564 - Dangerous goods packaging - Classes 1, 3, 4, 5, 6, 7, 8 and 9 - Requirements and test methods**
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# ABNT work on Bioethanol

## ABNT/TC-34: Petroleum

- ➔ **ABNT NBR 13781 - Service station - Underground storage tank handling and installation**
- ➔ **ABNT NBR 13782 - Service station - External protection system for carbon steel underground storage tank**
- ➔ **ABNT NBR 13786 - Service station - Equipments and system selection for fuel underground installations**
- ➔ **ABNT NBR 13787 - Control of supply of the systems of underground fuel storage (SASC) in the service stations**
- ➔ **ABNT NBR 13992 – Automotive gasoline – Determination of the fuel anhydrous ethylic alcohol (FAEA)**
- ➔ **ABNT NBR 14605 - Service station - Oil drainage system**





# ABNT work on Bioethanol

## ABNT/TC-34: Petroleum (cont.)

- ➔ **ABNT NBR 14606 - Service station – Personal access in confined space**
- ➔ **ABNT NBR 14639 - Service station - Electrical installations**
- ➔ **ABNT NBR 15456 - Storage of flammable and combustible liquids - Construction and test of dispenser pump**



# ABNT work on Bioethanol

## ABNT/TC-43: Corrosion

- **ABNT NBR 10891 – Fuel ethylic alcohol - Determination of pH Potentiometric method**

## ABNT/PC for Forest management

- **ABNT NBR 14789 - Forest management - Principles, criteria and indicators for planted forests**
- **ABNT NBR 14790 - Forest management - Chain of custody**
- **ABNT NBR 14791 - Guidelines for forest auditing - General principles**
- **ABNT NBR 14792 - Guidelines for forest auditing - Auditing procedures - Auditing of forest management systems**
- **ABNT NBR 14793 - Guidelines for forest auditing - Qualification criteria for forest auditors**



# ABNT work on Bioethanol

**ABNT/PC for Alcohol (established on 2005)**

**Specific commission for the work on the development of Brazilian standards for fuel ethylic alcohol**

**Work developed**

- ABNT NBR 8644 – Fuel ethylic alcohol – Determination of residues by evaporation**
- ABNT NBR 9866 – Ethyl alcohol - Total acidity determination**
- ABNT NBR 10547 – Ethyl alcohol - Determination of electrical conductivity**
- ABNT NBR 10891 – Ethyl alcohol - Determination of pH Potentiometric method**
- ABNT NBR 13993 – Fuel ethylic alcohol – Determination of gasoline content**



# ABNT work on Bioethanol

## ABNT/TC for Alcohol (cont.)

### Work in development

→ Fuel ethyl alcohol – Determination of the water content – Karl Fischer method

→ Revision of ABNT NBR 10894 – Fuel ethyl alcohol  
Determination of the concentration of chloride and sulphate – Ion chromatography method

→ Revision of ABNT NBR 11331 – Fuel ethyl alcohol  
Determination of the concentration of iron and copper  
spectrophotometry of atomic absorption method



# ABNT Bioethanol

## Next steps

**Spreading the scope of ABNT/TC-34 → to incorporate the biofuel work (ISO/TC 28 mirror)**

**Fostering stakeholders to a broad participation in the development of the work**

**Participation on the development of the “White Paper” → ASTM, CEN  
ABNT commitment from Washington Workshop, under the umbrella of  
IBF**



**Thank you**