Sample Acquisition

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Enhanced monitoring program

½ of all samples rejected for purpose intended.
Problem:

• Samples arriving in or with
  – Wrong container
  – Improper level of liquid
  – Poor labeling on can
  – Wrong / incomplete documentation
  – Transportation issues
Problem:

• Vendors / inspectorate companies
  – Poorly understand requirements from the assay perspective
  – Interpret safety requirements differently
Situation unacceptable

Information to be provided when crude oil samples are requested:

• Instruction sheet
• Common Crude name or type
• Expected API gravity range
• Sample size Special container requirements, if any (Teflon lined cans? Special acid washed glassware?)
• Contact information
Safety first

Sample shipping requirements are dictated by International Air Transport Association (IATA) regulations. Samples in 20-liter, 4-liter, or 1-liter cans that are shippable.
Sampling Costs:

Expected to be $250 to $500 USD (excluding customs and airport fees).

If the cost exceeds this amount, please pre-approve the expense before proceeding.
Sample Collection

Essential sample be representative.
Automatic line sampling (composite sampling) preferred.
Attention Grabber

20-liter (5 gallon) cans should be filled to the top and then ONLY 3 ounces removed to allow for expansion.

We will reject and not pay for samples that are not filled in this manner.

(ie, fill or keep)
Samples received since Jan 2005: 123

- Samples in metal containers: 98
- Samples in glass containers: 16
- Samples in plastic containers: 9
- Sample containers filled only 1/2 to 3/4 full: 4
Improvement:

50% to 10% reject rate
Tracking sample history

• Samples taken...
  • before loading: 3
  • during loading: 3
  • after loading: 3
• before discharge: 4
• during discharge: 25
• not stated on sample: 85
• Sample source...
• Line: 36
• Vessel: 10
• Shore tank: 8
• not stated on sample: 69
• Average days to receive sample after sample was taken: 26
• Longest time period from sample date to receipt date: 117
Refining Crude.