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FIG. 1

CRUDE 1,3-BUTADIENE

COLUMN: GS-ALUMINA

30 m X 0.53 mm I.D.

CARRIER: HELIUM AT 51 cm/sec (6.8 mL/min), MEASURED AT 95°C

95°C FOR 5 min

95-130°C AT 5°/min

130°C FOR 10 min

INJECTOR: SPLIT 1:10, 4 µL, 250°C

DETECTOR: FID, 250°C

NITROGEN MAKEUP GAS

AT 30 mL/min

1. ISOBUTANE
2. *n*-BUTANE
3. ACETYLENE
4. METHYLCYCLOPROPANE
5. *trans*-2-BUTENE
6. 1-BUTENE
7. ISOBUTYLENE
8. *cis*-2-BUTENE
9. ISOPENTANE
10. 1,2-BUTADIENE
11. 1,3-BUTADIENE
12. PROPYNE
13. VINYLACETYLENE
14. BUTYNE

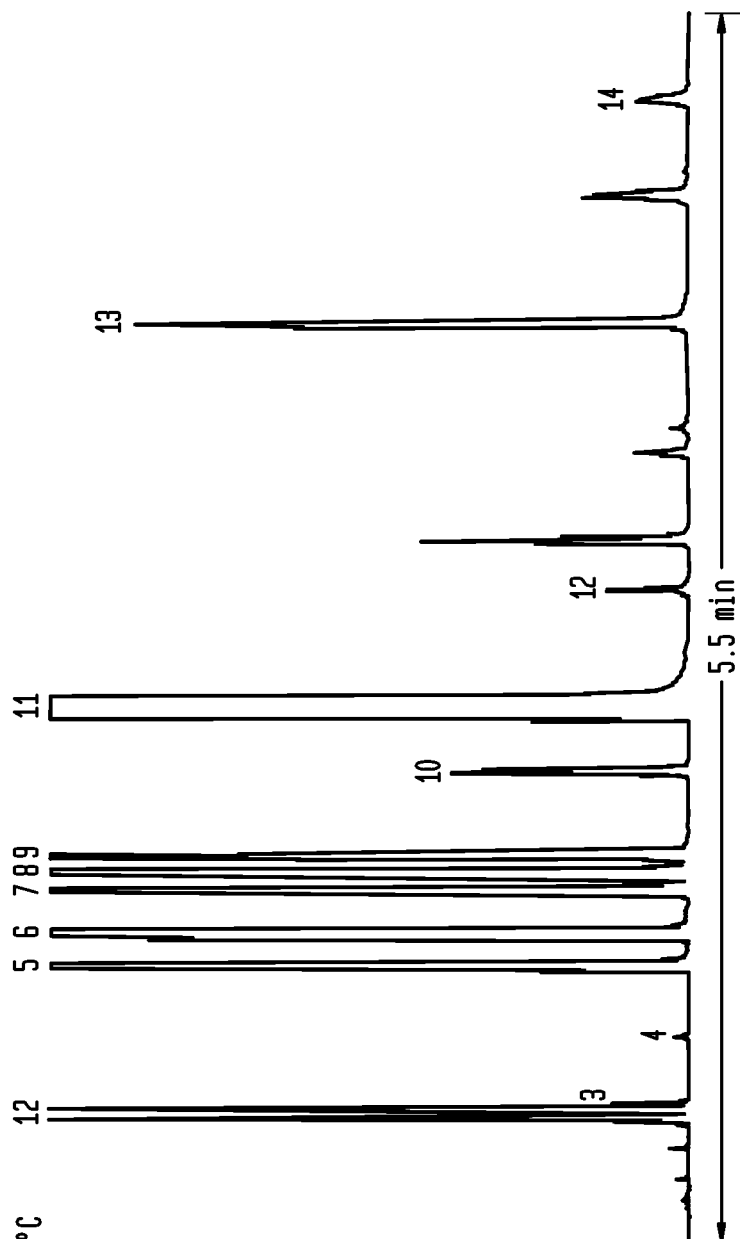


FIG. 2

REFINERY GAS SAMPLE (SYNTHETIC)

COLUMN: GS-ALUMINA

50m X 0.53 mm I.D.

CARRIER: HELIUM 6.8 mL/min, CONSTANT FLOW MODE

45°C FOR 3 minutes

6°/min to 195°C

INJECTOR: 250°C, SPLIT 1:50, 0.4 µL SAMPLE LOOP

DETECTOR: FID, 250°C

1. METHANE
2. ETHANE
3. ETHYLENE
4. PROPANE
5. PROPYLENE
6. ISOBUTANE
7. n-BUTANE
8. 1,2-PROPADIENE (ALLENE)
9. ACETYLENE
10. *trans*-2-BUTENE
11. 1-BUTENE
12. 2-METHYL-1-PROPENE (ISOBUTYLENE)
13. *cis*-2-BUTENE
14. ISOPENTANE
15. n-PENTANE
16. 1,3-BUTADIENE
17. *trans*-2-PENTENE
18. 2-METHYL-2-BUTENE
19. 1-PENTENE
20. *cis*-2-PENTENE
21. n-HEXANE

