

**EXPERIENCES WITH USE OF CORIOLIS MASS METER FOR
UNTREATED GAS**

by

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Phillips Petroleum**

Paper 1.3

**NORTH SEA FLOW MEASUREMENT WORKSHOP 1990
23-25 October 1990**

**National Engineering Laboratory
East Kilbride, Glasgow**

VERIFICATION OF TWO 1 1/2"

MICROMOTION MASS METERS

AGAINST SONIC NOZZLES

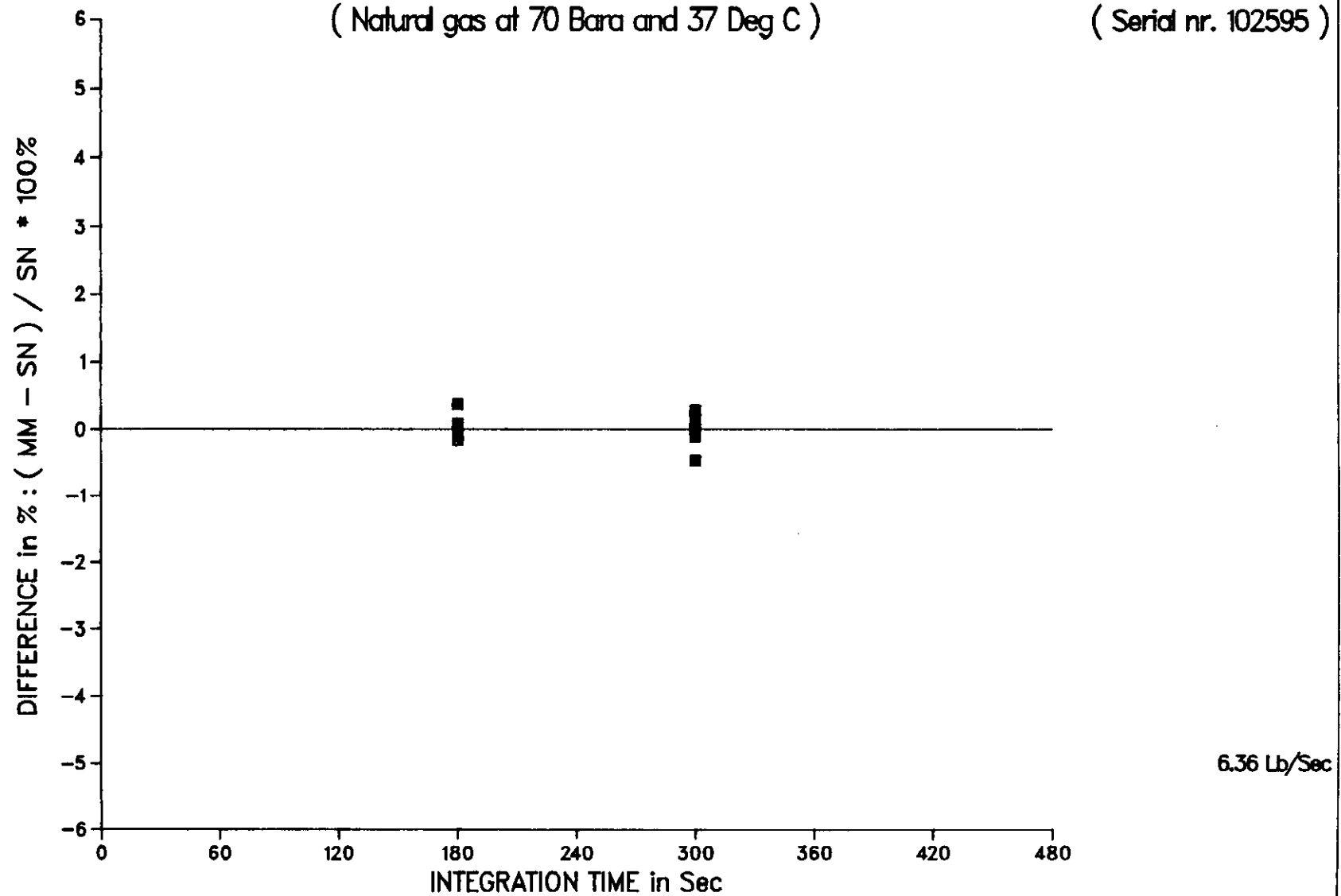
WITH NATURAL GAS

K-LAB 4-14 SEPTEMBER 1990

Fig 1: COMPARISON BETWEEN MICROMOTION AND SONIC NOZZLES

(Natural gas at 70 Bara and 37 Deg C)

(Serial nr. 102595)



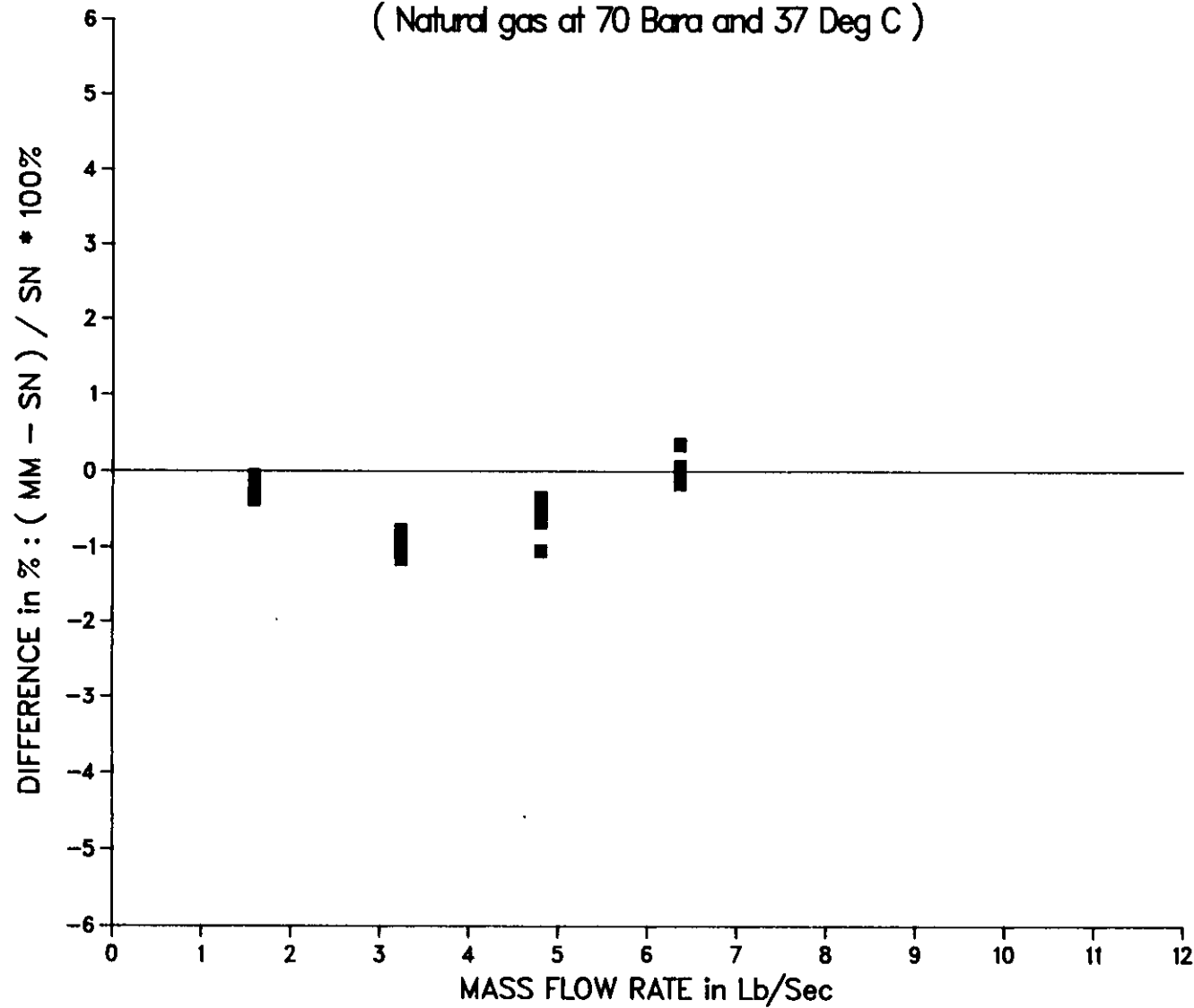
6.36 Lb/Sec

K-LAB 1990

Fig 2': COMPARISON BETWEEN MICROMOTION AND SONIC NOZZLES

(Natural gas at 70 Bara and 37 Deg C)

(Serial nr. 102595)



K-LAB 1990

Fig 3': COMPARISON BETWEEN MICROMOTION AND SONIC NOZZLES

(Natural gas at 70 Bara and 50 Deg C)

(Serial nr. 102595)

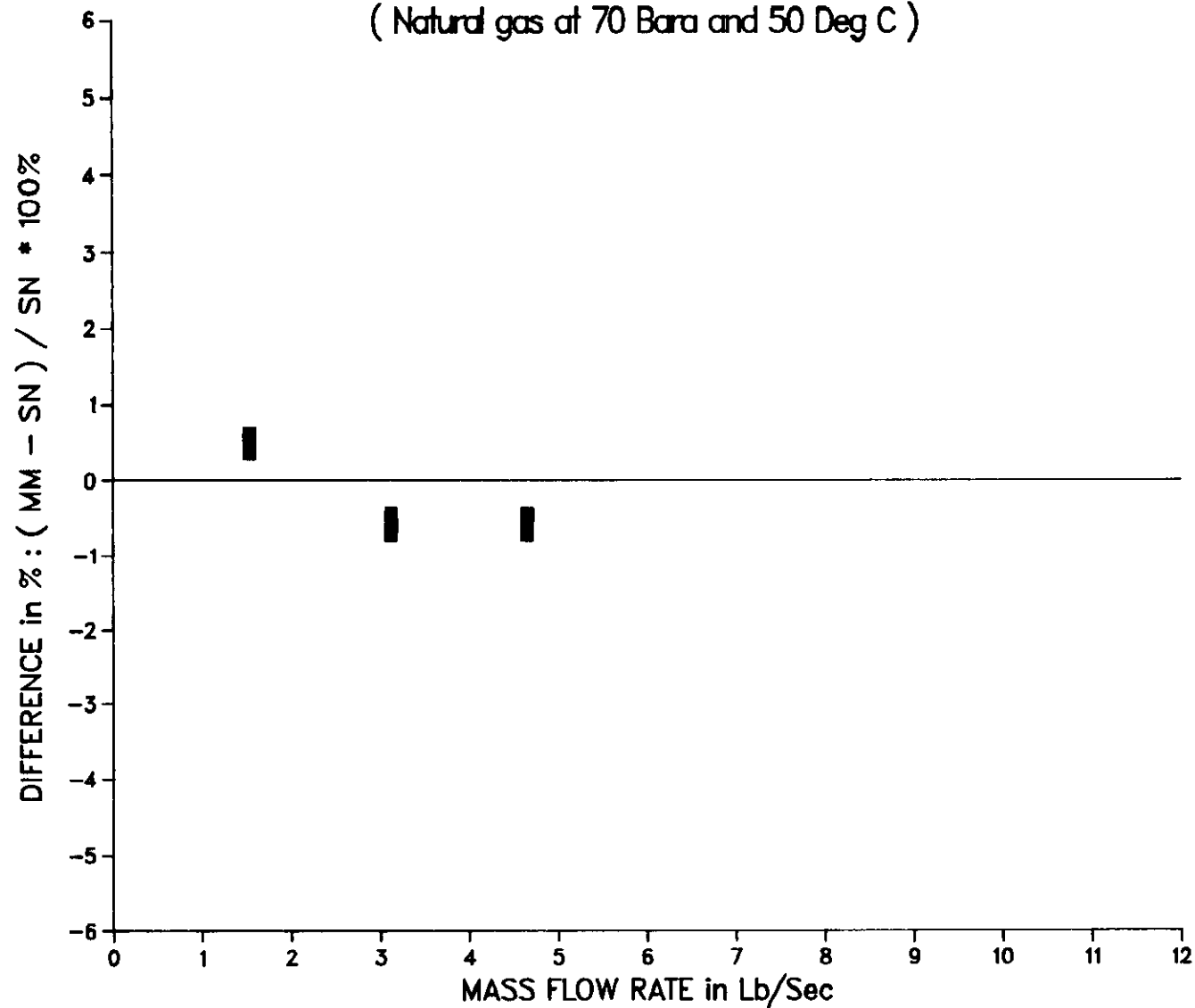
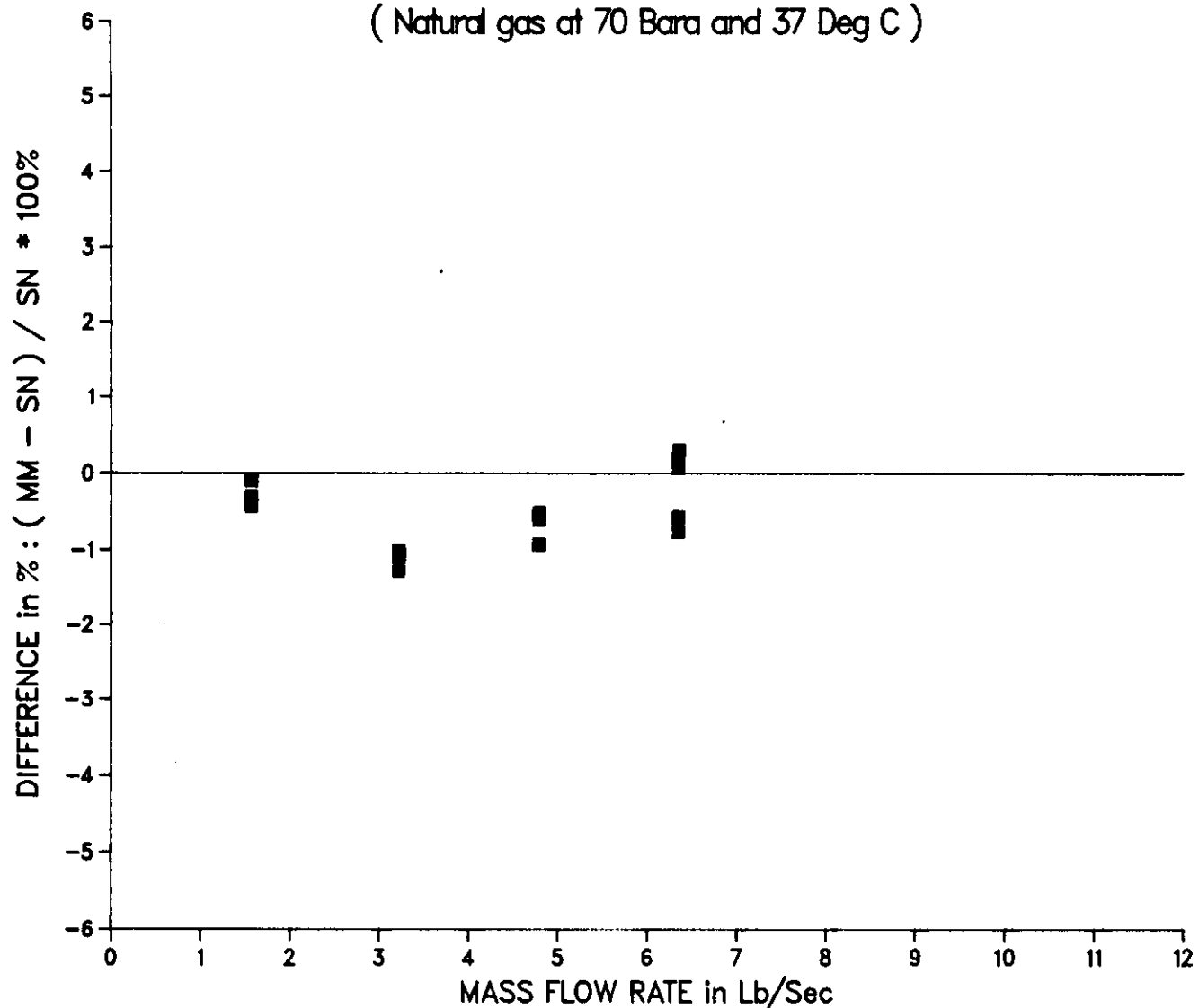


Fig 4a': COMPARISON BETWEEN MICROMOTION AND SONIC NOZZLES

(Natural gas at 70 Bara and 37 Deg C)

(Serial nr. 102595)



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FIG 4b': COMPARISON BETWEEN MICROMOTION AND SONIC NOZZLES

(Natural gas at 70 Bara and 37 Deg C)

(Serial nr. 102595)

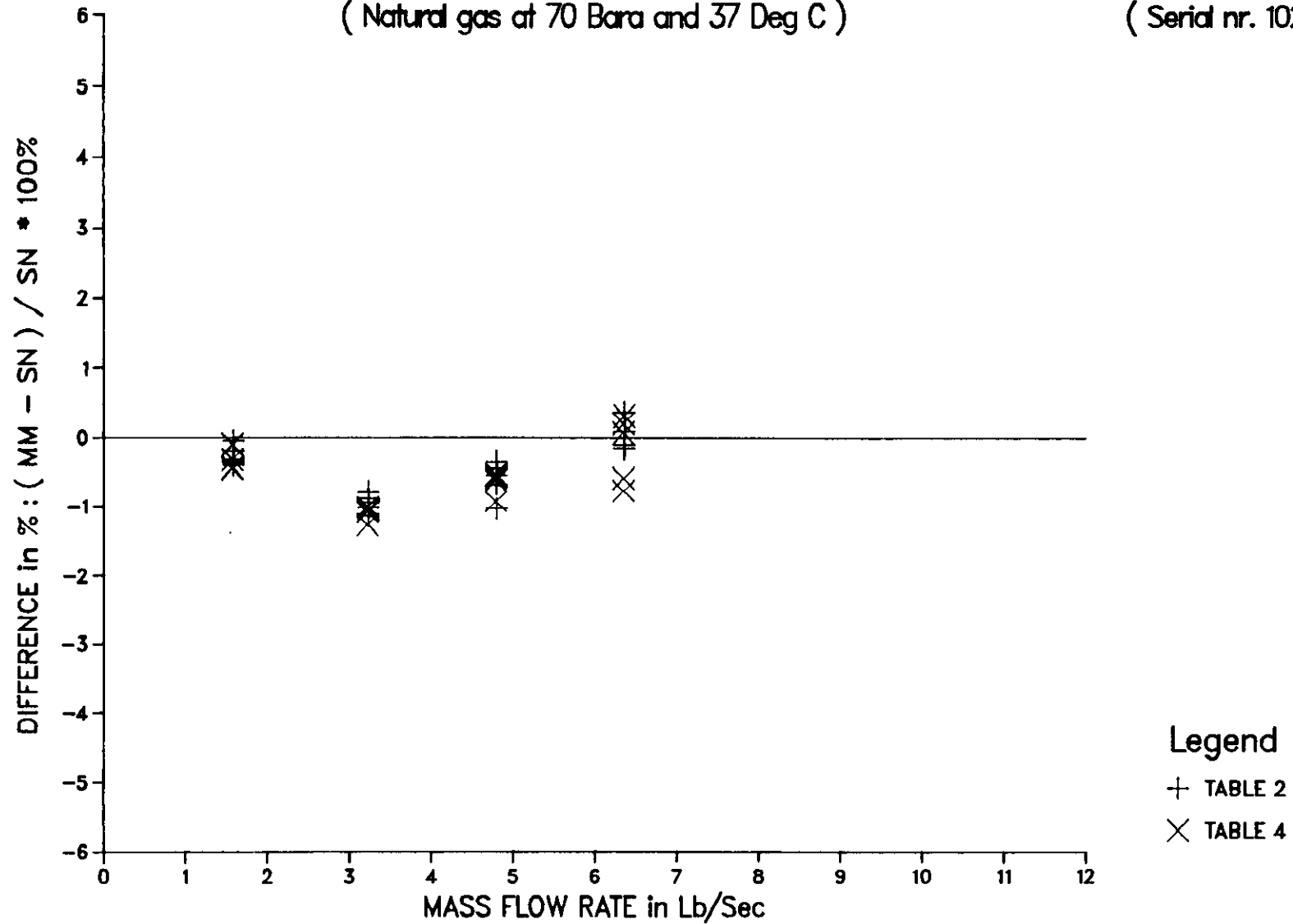
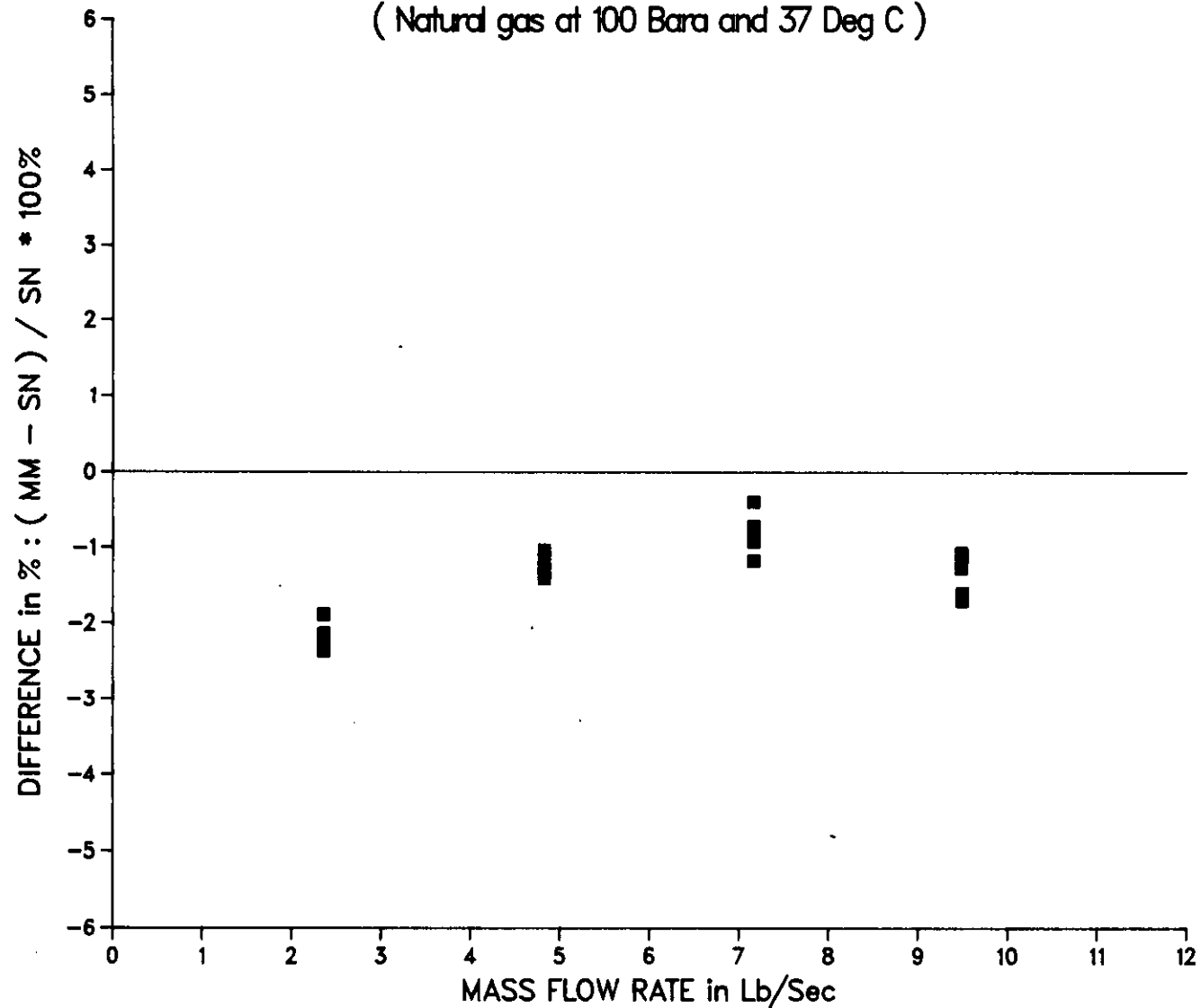


Fig 5': COMPARISON BETWEEN MICROMOTION AND SONIC NOZZLES

(Natural gas at 100 Bara and 37 Deg C)

(Serial nr. 102595)



K-LAB 1990

Fig 6': COMPARISON BETWEEN MICROMOTION AND SONIC NOZZLES

(Natural gas at 100 Bara and 50 Deg C)

(Serial nr. 102595)

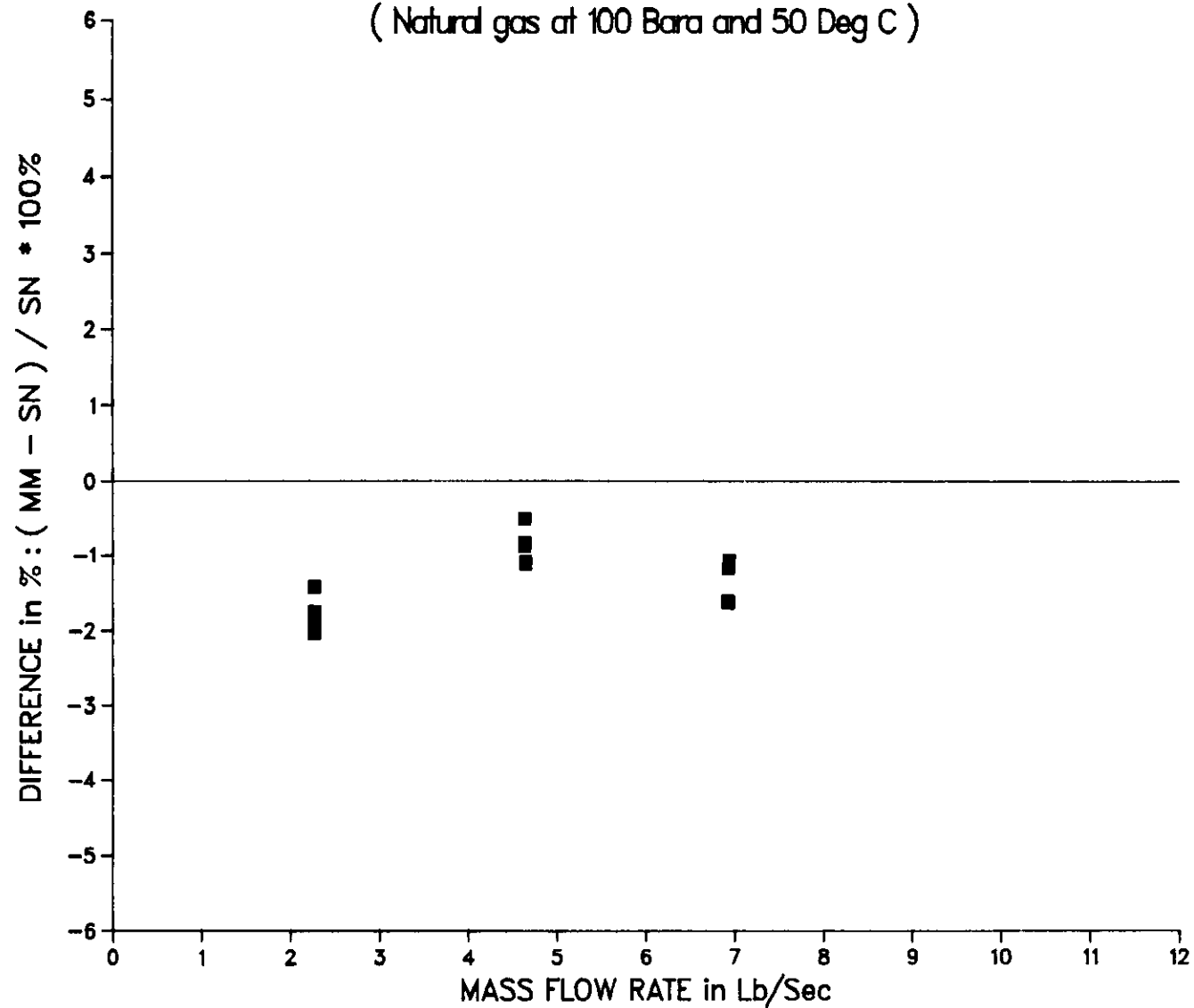


Fig 7': COMPARISON BETWEEN MICROMOTION AND SONIC NOZZLES

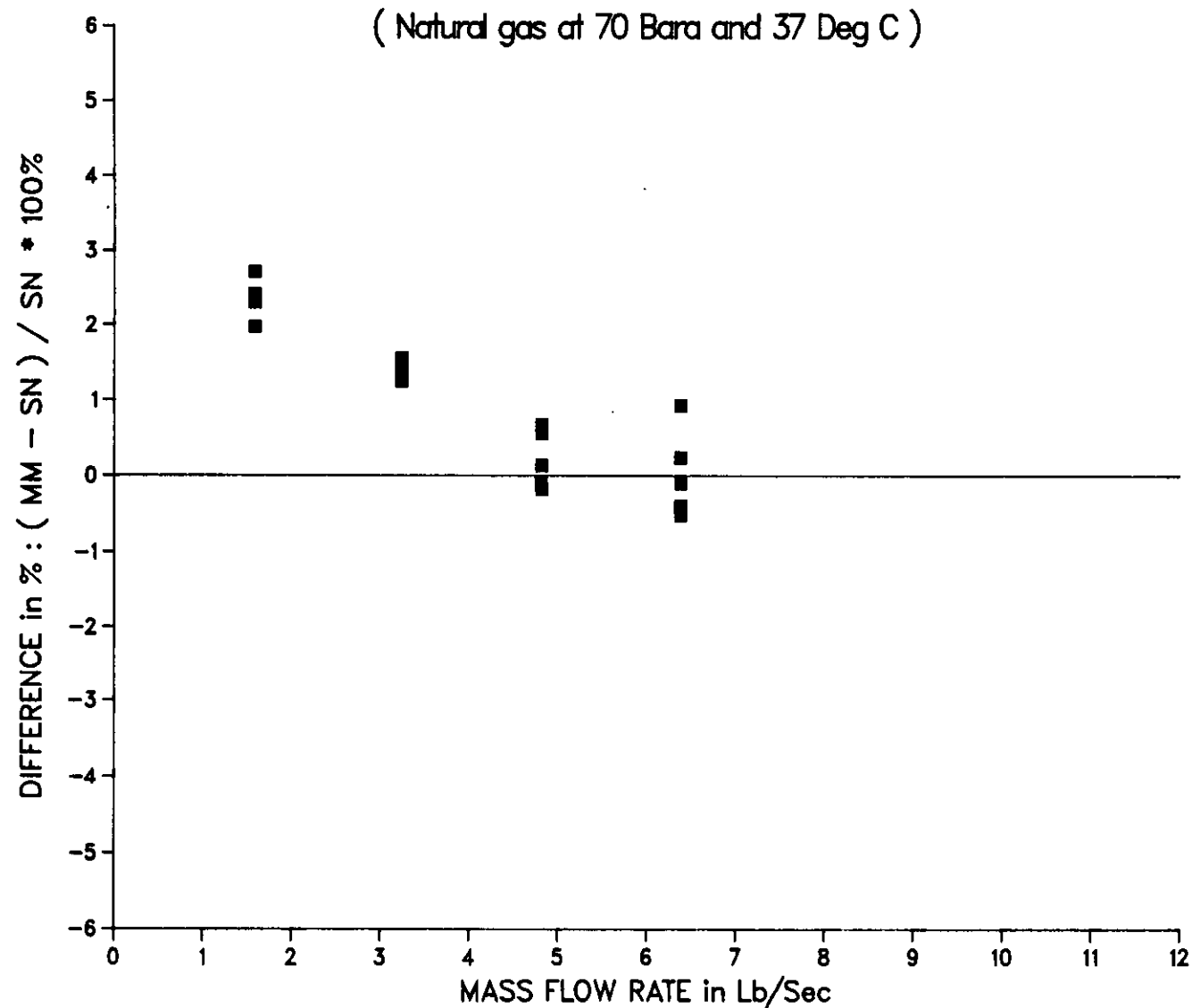


Fig 8': COMPARISON BETWEEN MICROMOTION AND SONIC NOZZLES

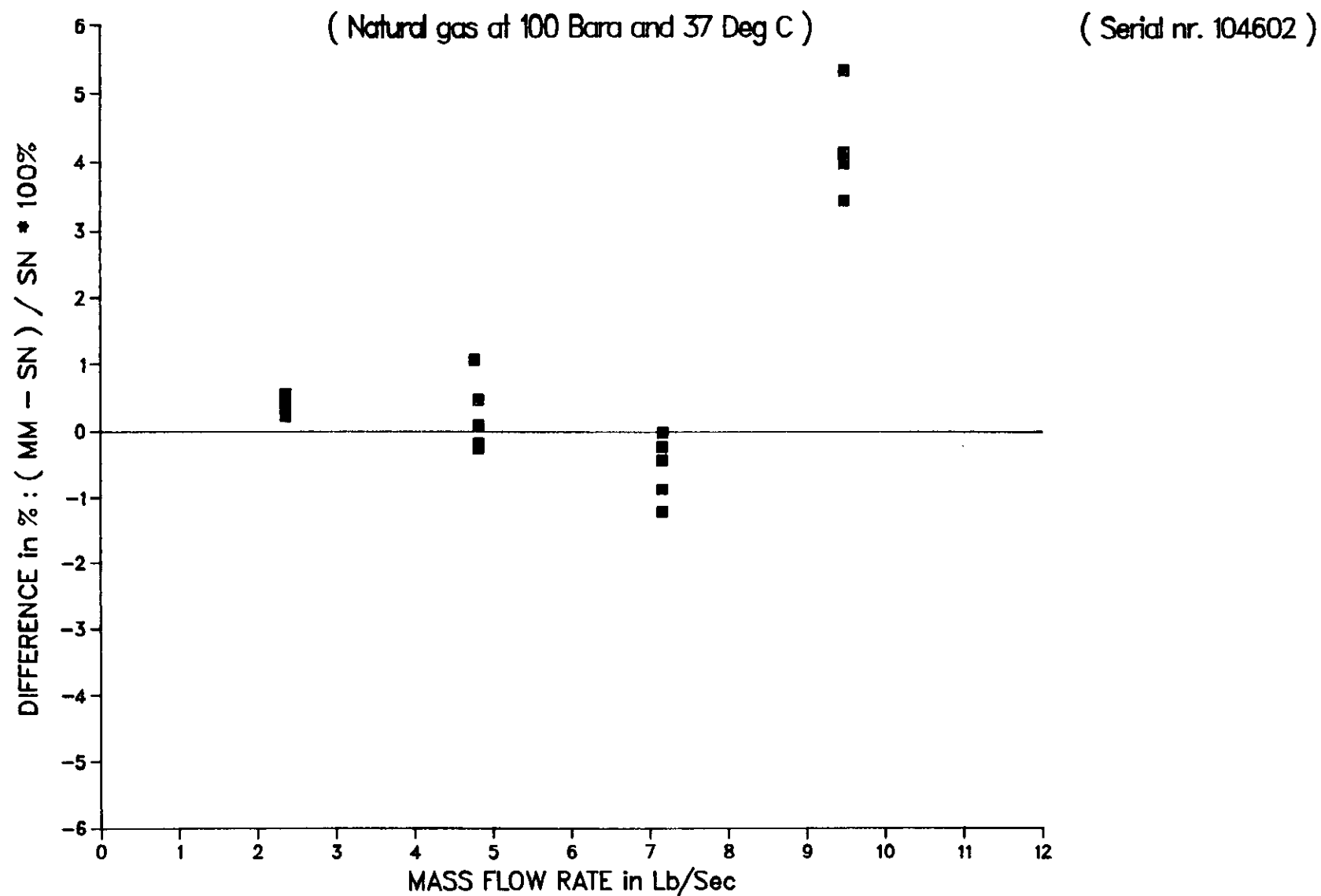
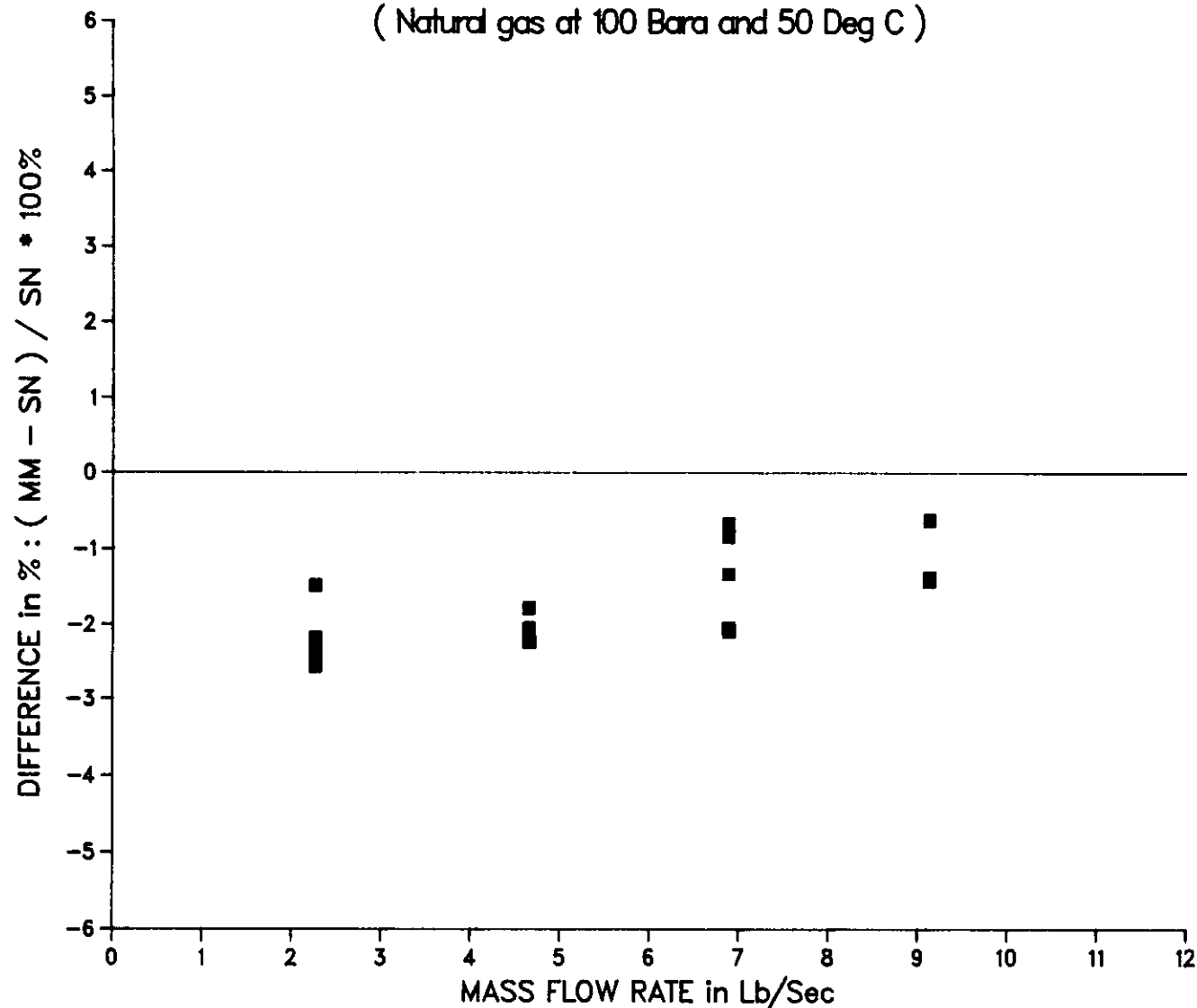


Fig 9': COMPARISON BETWEEN MICROMOTION AND SONIC NOZZLES

(Natural gas at 100 Bara and 50 Deg C)

(Serial nr. 104602)



TEST OF TWO 1 1/2"
MICROMOTION MASS METERS
FOR EDDA GASLIFT,
EKOFISK APRIL - AUGUST 1990

DAILY LIFT GAS MASSES

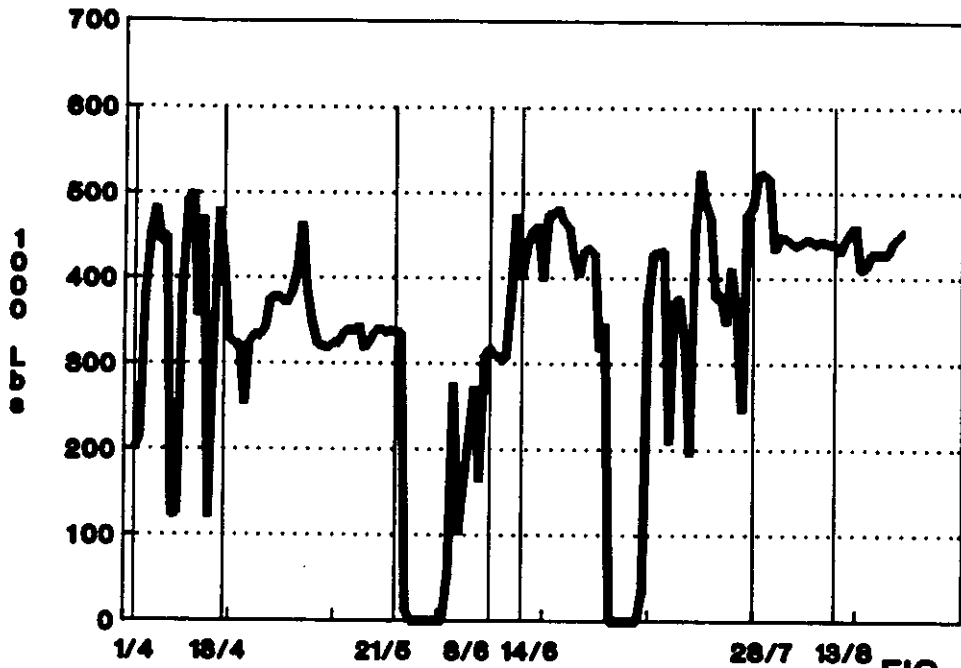


FIG. 1

LIQUID CONTENT (WEIGHT % C5+)

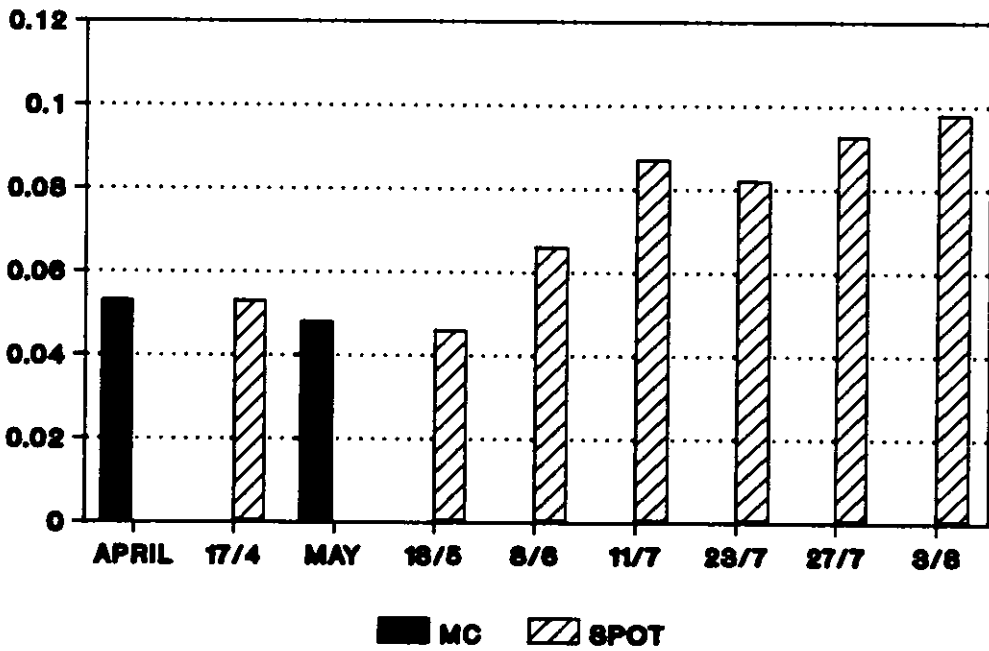


FIG. 2

TOTAL MASS METERED DURING TESTS

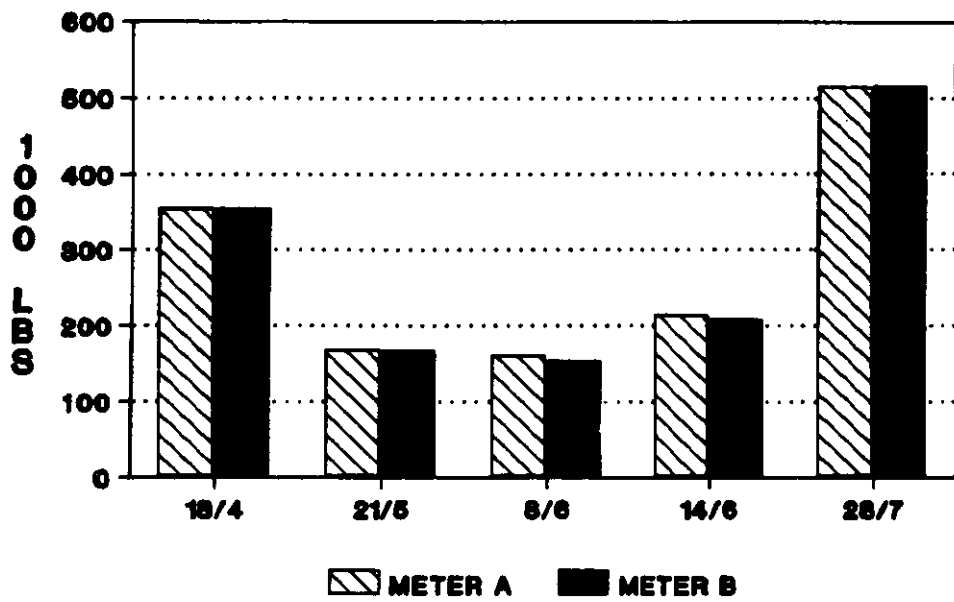


FIG. 3

PERCENT DIFFERENCE DURING TESTS DAILY AVERAGE

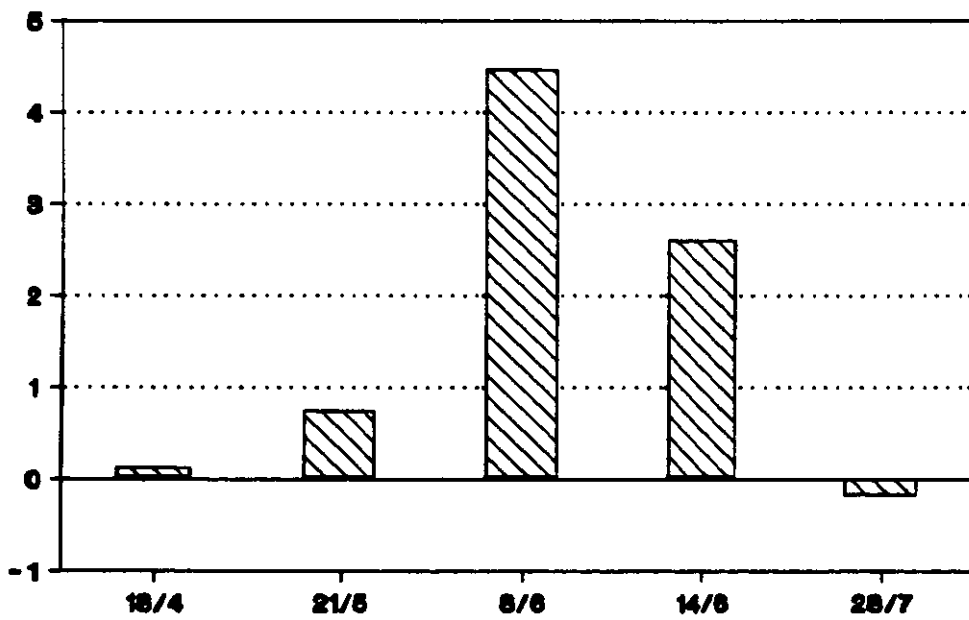


FIG. 4

PERCENT DIFFERENCE DURING TESTS

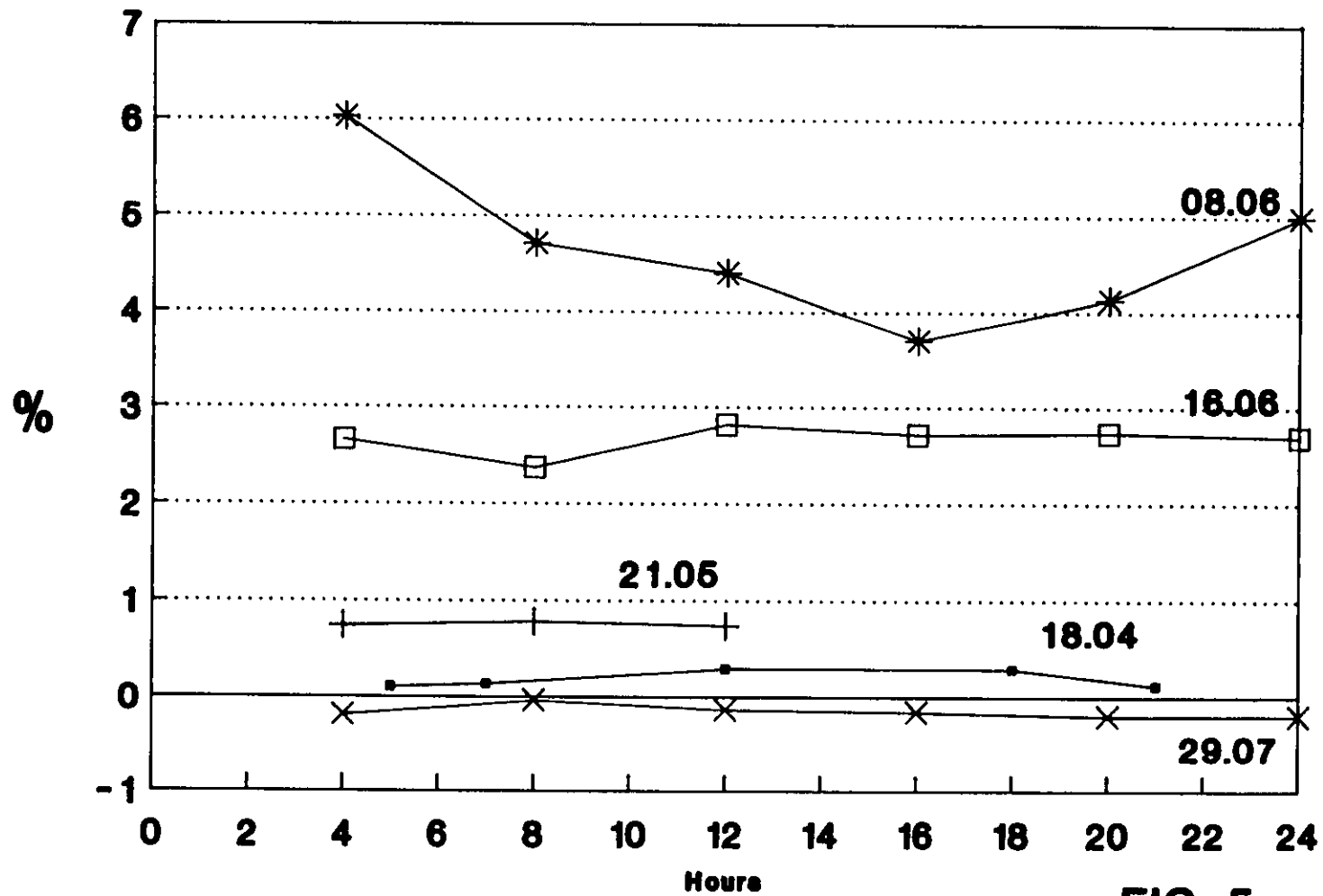


FIG. 5

TOTAL MASS METERED DURING TESTS

From 12 Aug to 19 Aug

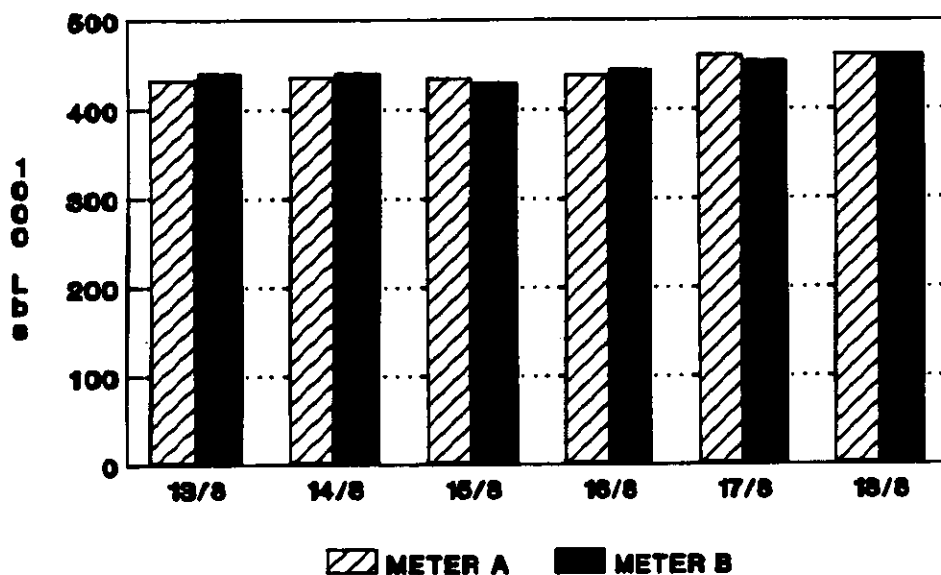


FIG. 6

PERCENT DIFFERENCE DURING TESTS

DAILY AVERAGE

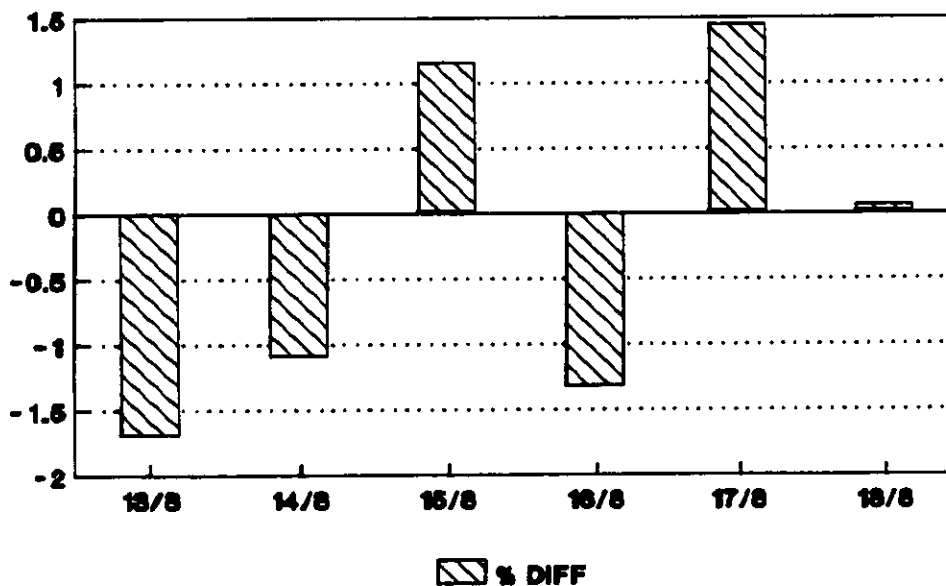


FIG. 7