the factory samples, and it has been alleged that water has been added to factory samples before they were tested by the factory staff. The factory testing officer could then afford to read his tests liberally, and the check testing officer's tests would show nothing wrong. A more definite system of checking up appears to be necessary in connection with the work of some manufacturing dairies, and it is believed to be available.

Routine work at grading stores now includes the testing of a box of butter from each churning for water and salt, and periodically testing a composite sample of a day's churnings for percentage of curd. The aggregate of these percentages subtracted from 100 leaves the percentage of butterfat in the butter. A composite sample from a cheese from each vat in each consignment to the grading store is tested for butterfat. Each month figures are supplied to the graders by dairy company secretaries indicating the number of pounds of butterfat credited to suppliers, and the number of pounds of butter or cheese made. The number of pounds of butter or cheese made multiplied by the percentage of butter-

the factory samples, and it has been added to alleged that water has been added to factory samples before they were tested by the factory staff. The factory testing officer could then afford to read his tests liberally, and the factory samples, and it has been added to 100 would give a result indicating the pounds of butterfat recovered in the manufactured product. There are now practically no legal gains in weighing and testing.

## "Legitimate Gains"

It is generally known that regulations within the last few years have dealt with those so-called "legitimate gains" of earlier years. Any advantage on tare weights of cream cans now legally goes to the supplier and offsets largely any gain which the company receives from the fraction of half pounds in weighing can and cream. In cream testing where the fat column shows over the half per cent., say 40.6, 7, 8, or 9, the legal test must be recorded at 41 per cent. The same principle applies in the testing of milk. These earlier so-called legitimate gains can now no longer be logically advanced as a satisfactory explanation of an unjustifiably high yield.

It is known that neither butter nor cheese can be made without some loss of butterfat, and the efficient manager endeavours to keep these losses down to a minimum. Much experience indicates that fairly good work is being done if for every 100 lb. of butterfat received a manager retains in the butter from farm separated cream 98 lb. of butterfat; in the butter from milk delivered to skimming stations, 96 lb. of butterfat; and in cheese 93 lb. of butterfat.

Our desire is to give companies and managers credit for all the efficiency the manager and his staff put into their work, and instead of using the foregoing percentages of butterfat recovery we suggest a further 1 per cent.. and assume that from every 100 lb. of fat delivered in farm separated cream 99 lb. of fat are recovered in the butter: from every 100 lb. of fat delivered in milk to skimming stations, 97 lb. fat are recovered in the butter; and for every 100 lb. of butterfat delivered in milk to cheese factories 94 lb. are retained in the cheese. Experience during later years might suggest some slight reduction to these percentages.

Knowing the pounds of butterfat recovered in the butter or cheese made during the month, and using the foregoing percentages of recovery, it is

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