

CORRESPONDENCE.

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MILK ADULTERATION.

TO THE EDITOR OF "THE ANALYST."

SIR,—As at the adjourned hearing of the milk case, held before the Bath magistrates, on the 12th inst., the worthy chairman expressed the inability of the magistrates to take notice of the chemical questions brought before them, would you kindly favour me with a little space so as to place the matter in a clear light before the public? Having learnt that at the first hearing the magistrates decided on sending the sample to Somerset House, I at once divided the portion which remained after my own analysis into two parts, one of which was kindly analysed for me by Mr. Stoddart, of Bristol, with the result that it contained "2 per cent. of fat." The other portion I analysed myself several times by different methods, but before giving the results it is necessary to state that when milk becomes sour, it is due to a portion of its solid constituents changing into lactic acid and gaseous products. This acid being like fat soluble in ether, would, if the milk were analysed by the process usually applied to new milk, be weighed with and reckoned as fat, thus giving too high a per centage. This it would appear the Somerset House authorities must have done, as my first analysis of the sour milk by this process gave 2·68 per cent. soluble in ether, the Somerset House result being 2·69. It is impossible to state positively that this is the case, as they give no other figures whereby an absolute conclusion can be formed, but the two numbers are so close that there is no reasonable doubt that the authorities used the process for new milk, and thus estimated acid and fat together. This is rendered the more probable, as my other analysis of the same sample gave from 2 to 2·25 per cent. of fat, thus not only corroborating my first result, but also coinciding with Mr. Stoddart's analysis.

The following figures will speak for themselves as to the reliance to be placed in the Somerset House authorities. In August of last year, a sample of milk sent from Bath to Somerset House was found by the analysts there to contain—water, 89·99; fat, 2·18; solids, 7·83; and was pronounced by them *to be unadulterated*.

On January 22nd, 1878, they gave the following reports on two samples forwarded from Kensington, London:—one, water, 89·09; fat, 3·22; solids, 7·69. Two, water 88·62; fat, 3·43; solids; 7·95. The first of these they stated *to be adulterated with not less than 7 per cent.*, and the second *with not less than 4 per cent. of water*.

Now, if you will kindly compare the above figures, you will perceive that in every particular, the Bath milk pronounced unadulterated was of a worse quality than the adulterated London ones, and these dicta were pronounced within four months of each other by the same authority, and signed by the same gentlemen. Further comment is superfluous.

J. W. GATEHOUSE.

BATH.