

**Table 1** Precision of weighing a 10 g weight on a Mettler H54AR five-place single-pan balance

|                | Mean (g)  | SD (mg) | Maximum difference in weighing |
|----------------|-----------|---------|--------------------------------|
| Within batch*  | 10.000134 | 0.005   | 0.01 mg                        |
| Between batch† | 10.000141 | 0.019   | 0.05 mg                        |

\*Mean of 10 consecutive weighings. The weight was equilibrated at room temperature for at least 24 h, removed from and placed in the balance using plastic forceps and the balance zero checked between each weighing. The 10 weighings were carried out within a period of 30 min to reduce fluctuations in ambient temperature, humidity and atmospheric pressure.

†10 weighings carried out on 10 different days.

**Table 2** Within batch precision\* of weighing glass and plastic vials using different handling techniques on the Mettler H54AR balance

| Material      | Method of handling | Mean (g)  | SD (mg) | Maximum change in weight from first weighing |
|---------------|--------------------|-----------|---------|--|
| Glass vials   | Plastic forceps    | 12.326798 | 0.012   | ± 0.03                                       |
|               | Paper tissue       | 12.326702 | 0.107   | − 0.34                                       |
|               | †Plastic gloves    | 11.519125 | 0.131   | − 0.39                                       |
|               | ‡Plastic gloves    | 12.326295 | 0.252   | − 0.78                                       |
| Plastic vials | Plastic forceps    | 5.452238  | 0.022   | − 0.08                                       |
|               | Paper tissue       | 5.452228  | 0.061   | − 0.19                                       |
|               | †Plastic gloves    | 5.452526  | 0.229   | ± 0.73                                       |
|               | ‡Plastic gloves    | 5.4154276 | 1.204   | ± 2.47                                       |

\*Each object was weighed 10 times using the same precautions as were used when weighing the 10g weight within batch.

†Minimal handling—that is, the vials were only placed in and removed from the balance.

‡Handling consistent with removal and replacement of the cap on the vial.

changes proved to be reproducible. In addition, although the apparent weight of a glass vial changed significantly from the initial weight over a series of weighings, I noticed that if the vial was left for a few hours under the same experimental conditions, its weight would return to within experimental error of the first weighing.

Although the errors described here are for the most part small and for routine purpose would be insignificant, in accurate work they could contribute significantly to the total error. Therefore in circumstances where accurate weighing in glass vials is required, it would be worthwhile taking the above factors into consideration and avoiding the associated errors by the careful use of plastic forceps—that is, handling the vials as little as possible. As has already been pointed out<sup>1</sup> the errors when weighing plastic vials can be large and again the careful use of plastic forceps can do much to reduce the errors involved.

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## Reference

- 1 Fleck A, Caine S, Merryweather M. Discrepancies in the weight of plastic vials. *J Clin Pathol* 1980;12:1220-1.

## Effect of oxygen on the lungs after blast injury and burns

I refer to the above article in your issue of October 1981,<sup>1</sup> and in particular to the description of the accident at Golborne Colliery in the second and third paragraphs of the article, which differs from that given by the report of the official inquiry. While the differences are not directly relevant to the type of injuries suffered, these do give a misleading impression of the way the pit was organised.

The correct facts as reported in the official inquiry of Her Majesty's Inspectorate of Mines are as follows:

1 On 18th March 1979 the fans ventilating the development heading (where the explosion occurred) were stopped to cater for a planned rearrange-

ment of electrical switchgear. A team of 11 men worked on this throughout the day shift on 18th March but the work took longer than expected and was not completed by the end of the shift.

2 Meanwhile methane gas accumulated in this heading because of the stoppage of the fans and a degassing operation was undertaken accordingly to remove this gas.

3 The explosion took place during this degassing operation and the ignition was attributed to an incensive spark produced at two exposed live connector pins in electrical apparatus.

4 At no time was the ventilation of the whole mine discontinued or interrupted. The main surface fan had operated continuously.

5 Only one auxiliary fan had failed due to mechanical damage. This fan was in a separate return drive and played no part in the explosion.

I would be grateful if you would be kind enough to print a correction setting out in full the facts listed above.

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## Reference

- 1 Hasleton PS, Penna P, Torry J. Effect of oxygen on the lungs after blast injury and burns. *J Clin Pathol* 1981;34:1147-54.

## Correction

### Cervical intraepithelial neoplasia

On page 8 of the article by CH Buckley *et al*<sup>1</sup> in the issue of January 1982, the legend to 6(b) should read "parabasal dyskaryotic cell".

- 1 Buckley CH, Butler EB, Fox H. Cervical intraepithelial neoplasia. *J Clin Pathol* 1982;35:1-13.