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EXPERT COMMITTEE ON BIOLOGICAL STANDARDIZATION

Geneva, 3-9 November 1971

CORRIGENDA

The title of this document should read:

"ANTI-hr' ANTI (c) INCOMPLETE BLOOD TYPING SERUM"

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ANTI-HR/ ANTI (C) INCOMPLETE BLOOD TYPING SERUM

from

WHO International Laboratory for Biological Standards,
National Institute for Medical Research,
Mill Hill, London

and

WHO International Blood Group Reference Laboratory,
London

1. Selection of bulk material

In 1966 contributions of serum obtained by Dr K. L. G. Goldsmith from a large number of sources were selected for their specificity for this blood typing antibody at the WHO International Blood Group Reference Laboratory. A total of some 880 ml of pooled high titre serum was obtained and freeze-drying studies (WHO/BS/66.830) carried out to ascertain whether this material was suitable and stable after it had been diluted (2:5 v/v) with inert AB serum to a final volume of some two litres. These results were reported to the Nineteenth Expert Committee.

2. Distribution into ampoules

In 1967 approximately two litres of frozen serum were received at the National Institute for Medical Research, London. On thawing, the serum was found to be considerably turbid and a considerable deposit removed by centrifugation at 10 000 rpm for 20 minutes at +2°C. The serum was then passed through a series of millipore membranes ending with one with a mean pore diameter of 0.45 μ . The total filtration time was five hours at room temperature; the sterile serum was then stored at +4°C overnight.

Next morning the serum was distributed into sterile hand glass ampoules, coded 67/160. The mean wet weight of every sixtieth ampoule was 0.516 mg + 0.5 per cent. The ampoules were placed on the freeze-drier shelves at -30°C and then transferred into liquid nitrogen before being freeze-dried at -30°C. The ampoules were then fitted with plastic plugs to curtail gaseous diffusion and dried to constant weight by secondary desiccation over P_2O_5 in a vacuum, filled with dry nitrogen and sealed.

The ampoules were tested for leaks and have since been stored at -20°C in the dark. Some ampoules have been stored at +4°C, +20°C, +37°C and +56°C for accelerated degradation studies.

(a) Oxygen content of gas in ampoules = 0.46 per cent. (average of three ampoules range 0.12 to 0.67 per cent.)

(b) Dry weight of freeze-dried plug: 39 mg. (average of six ampoules; range 38.9 to 40.5 mg)

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(c) Moisture content of freeze-dried plug: no moisture detected in any of 11 ampoules used.

3. Stability tests

This year the following haemagglutination titres were estimated in the Blood Group Reference Laboratory using individual dilutions with small dilution intervals.

	In saline	With R ₁ r cells	R ₁ R ₂ cells	rr cells
After 49 months at				
-20	No reactions	200	200	300
+20	No reactions	100	100	200
+37	No reactions	60	60	100

This material is thus considered adequately stable and a collaborative study is planned by the Blood Group Reference Laboratory.