

Instructions for use - ZZAP



IVD

NHS
Blood and Transplant

**For use in serological investigations
for *in vitro* diagnostic use only**
Product Code PN161
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Intended use

This product is intended to be used in the resolution of complex serological investigations involving IgG autoantibodies.

Principles of the examination method:

ZZAP is a mixture of cysteine-activated proteolytic papain and dithiothreitol (DTT). It is used to enhance the dissociation of red cell-bound IgG by causing IgG molecules to lose their integrity so that the treated red cells can be used for absorptions.

Components:

This reagent is supplied as a kit containing 0.2M DTT and 1% papain which has been activated by L-Cysteine.

Storage and Shelf life after first opening

Store at -20°C or below.

Discard 24 hours after thawing

Do not refreeze

Do not use beyond the notified expiry date.

Warnings and precautions:

This reagent is for professional use only.

Frozen storage at a temperature significantly above -20°C may result in an acceleration in the rate of loss of activity of the reagent.

Use the reagents as supplied, without addition or dilution.

The reagent should not be used if turbid or if there is evidence of precipitate, gel or particles present.

Primary sample collection, handling and storage

Red cells from clotted or EDTA samples may be used, usually less than 7 days old, different time scales apply to recently transfused samples.

Examination procedure

1. Thaw and mix 5mL of 0.2M DTT, 1mL 1% papain and 4 mLs of phosphate buffered saline pH 7.0. This is the ZZAP solution, which should be prepared immediately before use.
2. Mix 1 volume of washed packed patient's red cell with 2 volumes of ZZAP solution.
3. Incubate at 37°C for 30 minutes, mixing occasionally.
4. Wash cells 3 times in saline - the cells are now ready for auto absorption investigations.

Interpretation of results

By removing the IgG type antibodies from the red cell surface, underlying antibodies may be detected and identified.

Limitations

Deviation from the recommended technique may cause erroneous results.

Use of these reagents more than 24 hours after thawing may result in erroneous results.

Enzyme treatment of red cells destroys some antigens, notably M,N,S,s,Fya and Fyb.

Autoantibodies corresponding to these specificities will therefore not be absorbed using the recommended method. Red cell phenotyping for these antigens using red cells treated with the ZZAP reagent using the recommended method will be unreliable.

Performance characteristics

These reagents have been manufactured using methods as stated in 'Methods in Immunohaematology' by John Judd; Montgomery Scientific Publications; 1988

References

Pirofsky B, Rosner ER. A new method to differentiate between IgM and IgG red cell antibodies