1. **Principle**

Treatment of red cells with 6% AET (2-aminoethylisothiouronium bromide) inactivates Kell antigens (except Kx) and results in an artificial Ko cell. In addition, most of the following antigens are weakened or non-reactive: 9.1

Knops system, LWa, Yta, Ytb, Doa, Dob, Gya, Hy, Joa

1. **Scope and Related Policies**

All reagents prepared in-house that contain a controlled substance must be labeled with a workplace label as per WHMIS legislation.9.1

1. **Specimen – N/A**
2. **Material**

**Equipment:** Balance

**Supplies:** Weigh boat

Glass beaker or flask

Serological pipettes

pH strips

**Reagents:** 10 mL Distilled water

AET (2-aminoethylisothiouronium bromide)

5 N NaOH

1. **Quality Control** 
   1. Serological pipettes should be maintained as per manufacturer’s recommendations including adequate volume delivery, reduction of carryover and absence of contamination. 9.2
   2. AET must be stored in a dessicator as it is very hydrophylic.
2. **Procedure**

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| * 1. Measure 0.6 g of AET into weigh boat. |
| * 1. Add a small volume of the required 10 mL of distilled water to the AET powder to dissolve it. Pour this mixture into a beaker or flask. |
| * 1. Add remaining water and mix. |
| * 1. Adjust pH to 8.0 by slowly adding drops of 5 N NaOH. Add slowly measuring pH frequently. |
| * 1. Reagent is good for 24 hours at 4°C or may be aliquoted and frozen at -30°C for up to six months. |

1. **Reporting – N/A**
2. **Procedural Notes - N/A**
3. **References**
   1. WHMIS [www.whmis.ca](http://www.whmis.ca)
   2. CSTM Standards for Hospital Transfusion Services, ver 3 February 2011:3.4.5.1.
   3. Fung MK Ed. Technical Manual 18th Edition. AABB Press Bethesda MD; 2014 Method (3-18).
4. **Revision History**

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| **Revision Date** | **Summary of Revision** |
| December 1, 2014 | * Revised name of manual * Revised wording of section 1.0 to include “in addition, most of the following antigens are weakened or non-reactive.” * Added section 5.0 * Revised sections 6.0 & 8.0 * Updated list of references to include most recent editions |