**Model SOP**

**Standard Operating Procedure**

**Name of the facility / activity : Quality Control of Lectins**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SOP no.**  | **Effective Date** | **Pages** | **Prepared by**  | **Authorised by**  |
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| **Version** | **Review Period** | **Date of Review** | **Reviewed by** | **Number of copies** |
| VI | 2 years | 01-01-2015 |  | 10 |
| **LOCATION** : Blood Group Laboratory (Serology) |
| **SUBJECT** : Quality Control- To ensure reliability and reproducibility of blood group  results |
| **FUNCTION** : Daily Quality Control of Lectins.  |
| **DISTRIBUTION**: Supervisor Incharge Red Cell Serology Laboratory Master File |

1. **SCOPE & APPLICATION:**

This Standard Operating Procedure (SOP) provides the daily checks on blood group reagents to ensure reliability and reproducibility of blood group results.

1. **RESPONSIBILITY:**

It is the responsibility of the technician / supervisor in the red cell serology laboratory to ensure that quality controlled reagents and proper cell concentrations are used for testing for which daily quality control checks and test controls are used with proper documentation. The reagents should be stored and used as per manufacturer’s instruction.

Any fault in the reagents should be immediately reported to the Quality Assurance Manager.

1. **PROCEDURE:**

**Principle:** Lectins are saline extracts of seeds that act as good typing reagents and have high specificity at appropriate dilutions.

Two main lectins in lab use:

I Dolichous biflorus - anti –A I activity (agglutinates AI cells & not A2 cells)
2 Ulex curopcus -- Anti II activity (reacts with II antigen)

Use:

1. For detection of AI and Bombay - para Bombay phenotype or secretor status of individuals.
2. ABO/MN types
3. Characterization of polyagglutination types.

**QUALITY CONTROL**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 5% CELL  | TITER  | AVIDITY  | AGGLUTINATION |
|  | SUSP. IN  | (IMINUTE SPIN) |  |   |
| ANTISERA  | SALINE  |  |  |  |
| ANTI A1  | A1 CELLS  | I : 16  | 15-20 SECONDS  | +++ |
| D.BIFLOURUS  | A2 CELLS  | NEGATIVE  |  | - |
|  | O CELLS  | NEGATIVE  |  | - |
|  |  |  |  |  |
| ANTI-H  | A1 CELLS  | 1:1 | 15-20  | + TO + |
| E.EUROPEUS  | A2 CELLS  | 1:8  | SECONDS  | ++ |
|  | O CELLS  | 1:16  | 15-20 SECONDS  | +++ |
|  | OH  | NEGATIVE  | -  |  |
|  | PHENOTYPE  |  |  |  |

1. **DOCUMENTATION:**

Enter the results in the Blood Group Register in the Red Cell Serology Laboratory. Sign the results as the individual preparing the pooled cells and testing the reagent.

1. **REFERENCES:**
2. Technical Manual of the American Association of Blood Banks – 15th edition 2005.
3. Introduction to Transfusion Medicine – Zarin Bharucha and D.M. Chouhan; 1st Edition, 1990.
4. Training module for laboratory technologists. National AIDS Control Organization, Ministry of Health and Family Welfare, Govt. of India publication, 1995.
5. **END OF DOCUMENT.**