



The Matrix Gel system offers a beneficial platform of enhanced sensitivity, specificity and simplicity to the immuno-haematologists and Laboratarians for blood grouping, typing, antibody screening and identification.

Tulip has used its vast experience and resources to develop the Matrix Gel System based on the Gel column agglutination technology indigenously.

The Matrix Gel system has been thoroughly evaluated for its performance and is comparable to other equivalent methods.

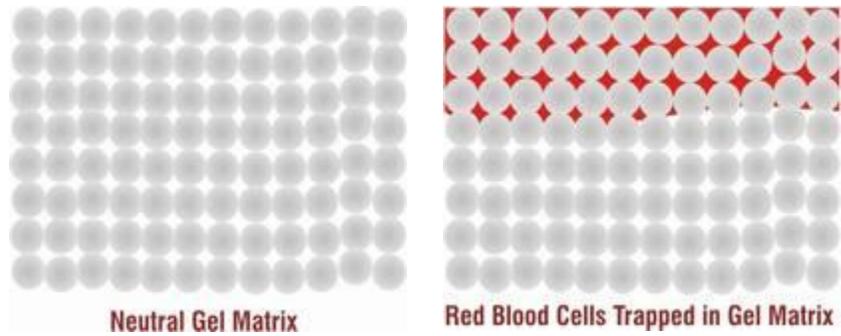


Principle of the Gel System

In the gel system, unlike in the tube test the agglutination does not take place in an aqueous phase instead it takes place in specially devised micro tubes, preformed in a plastic card known as the gel card.

The gel column agglutination method is used to detect red cell antigen and antibody reactions in the microtubes which may be neutral or may contain appropriate reagents depending on the application; such as Anti-A, Anti-B, Anti-D, Anti Human Globulin etc.

For forward grouping, typing and direct antiglobulin tests, a suspension of patient red cells is added to the top of the microtubes and for reverse ABO grouping, antibody screen or identification a mixture of patient red cells or reagent red cells with patient serum or reagent is added to appropriate microtubes.



The addition is then followed by centrifugation in a specially devised card centrifuge under controlled centrifugal force and time. In negative reactions the antibodies do not attach the red cells and the red cells freely pass through the gel and pellet to the bottom of the microtube. Conversely in a positive reaction the agglutinates are trapped in the gel to various degrees based on the degree of agglutination.

Matrix gel system, utilises the gel column agglutination technology offers many end user benefit to the laboratarians imparting sensitivity and objectivity to immunohematological analysis.

Typical readings in a Matrix Gel card			
	4+ Reaction		+/- Reaction
	3+ Reaction		- Reaction
	2+ Reaction		Hemolysis
	1+ Reaction		Mixed field agglutination

Advantages of Matrix Gel system:

Stable End Reactions

- Read results hours later
- Can be saved for QA or peer review
- Can be photocopied for documentation

Objective Interpretation of results

- Easy interpretation of weak reactions
- Relatively skill free

Enhanced Sensitivity

- Better detectability especially in antibody screen and cross match

Eliminates cell wash step

- Less skill and technique demands
- Saves time

Small sample size

- More flexible
- More convenient

Indigenously Manufactured

- Easy availability
- Long shelf life
- Another first from Tulip

Tulip's Technical Support

- Dependability



Matrix Gelcards

Description	Configuration						Cards /Pack	Profiles/Card
Matrix forward grouping confirmation card	A	B	D	A	B	D	24	Two
Matrix ABOD forward and reverse grouping card	A	B	AB	D	RN	RN	24	One
Matrix ABO subgrouping card	A ₁	H	A ₁	H	A ₁	H	24	Three
Matrix Neonate grouping card	A	B	AB	D	Ctrl	AHG	24	One
Matrix Reverse grouping card	N	N	N	N	N	N	24	Three
Matrix Rh Genotype card	C	c	E	e	D	D ^u	24	One
Matrix AHG card	AHG	AHG	AHG	AHG	AHG	AHG	24	Six
Matrix AHG crossmatch card	AHG	AHG	AHG	ENZ	ENZ	ENZ	24	Three
Matrix forward grouping and crossmatch card	A	B	D	ENZ	AHG	AHG	24	One

Matrix Equipments

Components	Code	No.
Matrix card centrifuge	CC-1600	Unit
Matrix Work station	WS-1600	Unit
Matrix Incubator stand	IS-1600	Unit
Matrix bottle top diluent dispenser	BD-5250	Unit
Matrix sample dispensing pipette	MP-0550	Unit

Matrix Diluents

Matrix Diluent 1	PAPAIN SOLUTION for sample preparation	Pack 250 mL
Matrix Diluent 2	LISS SOLUTION for sample preparation	250 mL