

- **ABO Adsopak® for ABO antibodies removal**

Removal of antibodies against ABO antigens gives the possibility of transplantation across ABO barrier.

Transplantation of solid organ across incompatible blood group barriers is associated with severe complication and is therefore not performed in standard clinical practice. But the increasing number of patients awaiting transplantation stimulates the efforts to develop new therapeutic strategies with the aim to overcome ABO barrier.

Now there is a large number of clinical data demonstrated efficacy and safety of the treatment using A/B antigen specific columns regarding ABO incompatibility problem.

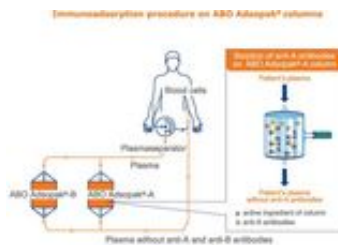
ABO Adsopak® columns are a new medical devices for extracorporeal elimination of anti-A and anti B antibodies. There are two types of adsorption columns – **ABO Adsopak®-A** and **ABO Adsopak®-B** – specific for anti-A or anti-B antibodies accordingly.

Adsorption columns consist of glass housing filled by active ingredient. The columns are assembled by plastic tubes for connection with plasma line of primary plasmaseparation device or columns running unit. Column volume is 100 ml. The active ingredient is an oligoconjugate immobilized on inert saccharose matrix. Oligoconjugate is produced by chemical synthesis using blood group oligosaccharides and polymer. The active ingredient is biocompatible. It is sterilized by autoclaving.

ABO Adsopak® columns are intended for personal multiple use. The columns can be used several times during one procedure as well as during several consecutive treatments. The recommended volume of patient plasma passed through each column is 3.0-3.5 L. The quantity of anti-A and anti-B antibodies decreases on 3-5 fold during procedure depending on initial level.

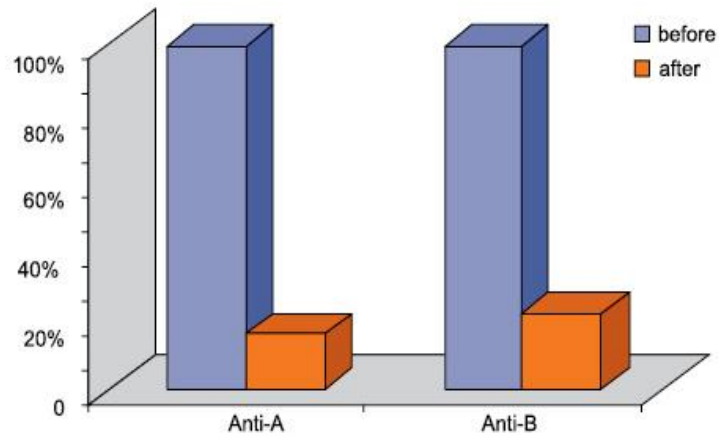
ABO Adsopak® columns is an effective tool for anti-A and anti-B antibodies elimination

Adsorption columns are medical devices for plasmatherapy, which are included into plasma line of extracorporeal circuit. Both anti-A and anti-B columns or only one column can be used depends on blood group of donor and recipient.



The primary device is plasmaseparator, which divides patient blood to plasma and cells. The patient's plasma passes through **ABO Adsopak®-A** column or **ABO Adsopak®-B** column or both columns simultaneously. During the treatment plasma is depleted from circulating anti-A/B antibodies and is returned to the patient. The active ingredient of column binds the anti-A/B antibodies according to the principle of affinity chromatography by antibody-antigen interaction.

Level of anti-A and anti-B antibodies before and after adsorption on ABO Adsopak® columns



Anti-A/B antibodies bind with adsorption gel are eluted by glycine buffer (pH 2.5), additional wasing by saline returns pH to physiological level. So the column can be regenerated and used in the next procedure. Between the treatments columns are stored in storage solution (PBS-buffer, containing 0.01% sodium azide) at 2 – 8 °C. That storage solution is washed out from the columns prior to each apheresis procedure by saline. The guaranteed usage of each **ABO Adsopak®-A** and **ABO Adsopak®-B** column is 20 therapeutic apheresis procedures.