

## DATA SHEET

### EZ -AR™ Elegance Solutions

### Cat. Nos. HK546-XAK, HK547-XAK

Doc. No. 932-HK546-XAK; Rev. D

Revision Date: 10-Aug-2020

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#### Reagents Supplied: One of the following

Name	Catalog Number	Pack Size
EZ-AR™ 1 Elegance RTU	HK546-XAK	1L
EZ-AR™ 2 Elegance RTU	HK547-XAK	1L

#### EZ-AR™ 1 Elegance, EZ-AR™ 2 Elegance Solutions:

These solutions perform antigen retrieval in formalin-fixed, paraffin-embedded tissue sections using heat retrieval. Different tissues require different types of pretreatment conditions. Depending on the nature of the tissue and the antigen retrieval requirement, one of the EZ-AR™ Elegance solutions may be used. EZ-AR™ 1 Elegance is Citra-based solution, EZ-AR™ 2 Elegance is EDTA based solution. The EZ-AR™ Elegance Solutions are designed to enable optimal Dewaxing, Rehydration and Antigen Retrieval.

The main advantages that these solutions offer are:

1. Eliminates the use of enzymes as pretreatment in most cases, hence removing the guesswork from optimizing treatment time on the basis of tissue fixation.
2. Reduces background staining: EZ-AR™ Elegance solutions increase the availability of antigenic epitopes in tissues due to their capability of being heated up to a temperature of 110°C without boiling thus preventing reagent evaporation.
3. Reduces incubation time with primary antibodies
4. Better quality staining due to unique properties of solution.
5. Preserves morphology of tissues.
6. Non-toxic and non-flammable.

#### Storage And Handling

Store solutions at 2° to 8°C. These reagents are expiration dated. When properly stored, the reagents are stable to the date indicated on the label. The solution should be disposed of according to local, state, and/or federal regulations. Upon disposal, flush with large volumes of water to prevent buildup in plumbing.

#### Intended Use

The EZ-AR™ solutions are intended to deparaffinize, rehydrate and recover antigenicity of epitopes in formalin-fixed, paraffin-embedded tissue sections. These products are designed for manual use (appears under manual staining on website while Xmatrx has different catalog numbers (HX031-HX034)). These products are for Laboratory Use Only.

#### Standard Protocol

1. Rinse slides in deionized water. Place slides in a plastic staining holder\*\* with any empty slots filled with blank slides. Place the holder in a slide bath containing 250 ml of Antigen Retrieval *Citra Plus* Solution. Place the lid loosely on the bath and center it inside a microwave oven on a paper towel to adsorb any liquid runover.

2. Turn the oven on high power (500-1,000 watts) and closely watch the solution until it comes **to a rapid boil**, and then turn off the oven. (Note: It usually takes 3-7 minutes before a boil is reached. However, the amount of time required may vary significantly depending on a number of factors, such as the starting temperature of the retrieval solution, the wattage of the microwave oven, the age of the oven and the inside temperature of the oven. It is very important that a rapid boil is reached for every run before proceeding to the next step.)

3. Set oven power to approximately 50% level and heat for 10 to 15 minutes. (Note: The power setting should be adjusted so that the oven cycles on and off every 20-30 seconds and the solution boils about 5-10 seconds each cycle. A successful run should give frequent, but not continuous boiling without any liquid runover. This power setting should be noted and used for this step in all subsequent runs for the same antibody. Each antibody should be tested for the optimal time for this step.)

4. Remove the slide bath from the microwave oven. Allow slides to cool for 20-30 minutes at room temperature. Rinse with several changes of deionized water. Place slides in 1X PBS and continue with the immunostaining procedure

### **Limitations**

The Antigen Retrieval protocol is recommended for use with tissues fixed *with formalin only*. Other fixatives or fixation procedures may not produce comparable results. Some tissues may show heat artifact.

### **Reference Articles**

1. Shi, S.R., et al. Antigen retrieval in formalin-fixed, paraffin-embedded tissues: an enhancement method for immunohistochemical staining based on microwave oven heating of tissue sections. *J Histochem. Cytochem***39**:741-748, 1991.
2. Gown, A. M., et al. Microwave-based antigenic unmasking: a revolutionary new technique for routine immunohistochemistry. *Appl. Immunohistochem.* **1**:256-266, 1993.
3. Shi, S. R., et al. Antigen retrieval technique: a novel approach to immunohistochemistry on routinely processed tissue sections. *Cell Vision***2**:6-22, 1995.
4. Shi, S.R., et al. Antigen retrieval immunohistochemistry under the influence of pH using monoclonal antibodies. *J. Histochem. Cytochem.* **43**:193-201, 1995.

**The above products and their methods are covered by one or a combination of any of the following patents: U.S. Patent No. 5,244,787; U.S. Patent No. 5,578,452; U.S. Patent No. 6,451,551; U.S. Patent No. 6,632,598; and their foreign equivalents, i.e. European Patent No. 0607422 and Japanese Patent No. 3,108,099; as well as related U.S. and Foreign Patents Pending.**