



# OMX-S<sup>®</sup> MS Instruction Manual\*

## April/08

Part No.: 17009

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### 1. Introduction

OMX MS is a special package containing the ordered number of OMX-S<sup>®</sup> for gel picking and sending the samples to OMX GmbH for protein analysis.

With OMX technique, existing protocols for the in-gel digestion of protein bands can be accomplished in one single device. Sample preparation is rapid, significantly simplified and the risk of contamination is minimized.

The OMX-S<sup>®</sup> device is a three-in-one tool featuring a combination of

- a *Picker* for cutting protein bands or spots from an electrophoresis gel
- a *Reactor* enabling the in-gel digestion of the protein spots
- a *Sampler* collecting solutions from the reactor

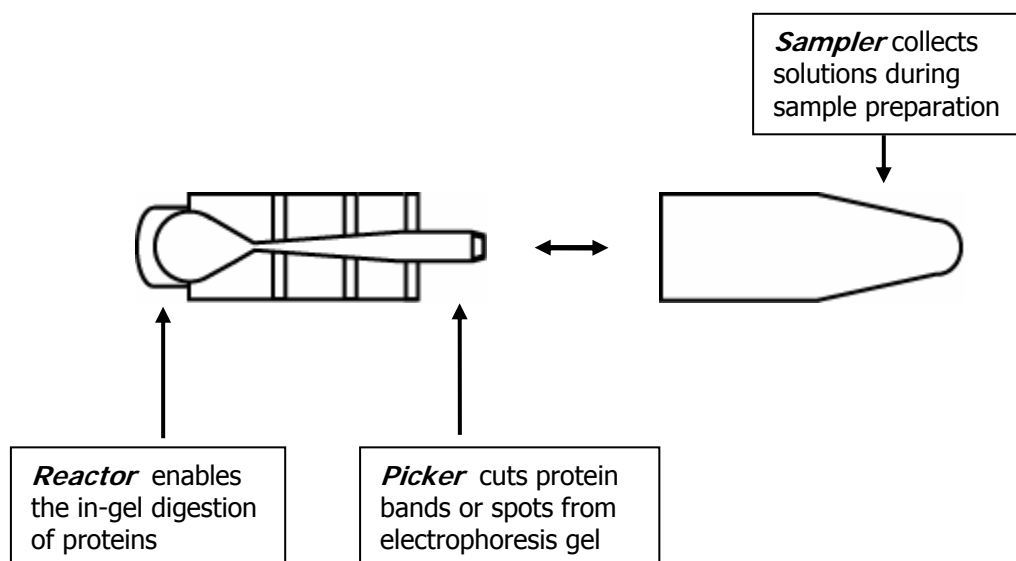
This guide features a detailed protocol to prepare your samples for mailing.

### 2. Content and precautions

#### 2.1. Content

This package contains the ordered number of OMX-S<sup>®</sup> and the instruction guide.

## 2.2. Description of the OMX-S® device



## 2.3. Precautions and important notices

OMX-S® is developed for laboratory use only. No hazardous components are contained within OMX-S®. Nevertheless, appropriate safety apparel such as lab coat, eye protection and especially cleaned gloves should be worn. These precautions help to avoid sample contamination especially with traces of keratin.

The OMX-S® device is manufactured for single use. Until use, OMX-S® should remain stored in the original package under clean conditions at room temperature in order to avoid any contamination. The device should be used within 12 months from the date of purchase. The reactor of OMX-S® contains flexible components. We therefore guarantee proper efficiency only if the reactor remains closed.

The average weight of an empty OMX-S® is 1.46 g. Please, use a suitable tare, if only one OMX-S® is used in a centrifuge.

## 3. Protocol

### 3.1. Sample information form

An accepted sample information form is required prior sending your samples. For protein spots out of the same gel one form is sufficient. If you have more than four samples from one gel, please use a second form. Additional forms can be downloaded at [www.omx-online.com/OMX\\_sample\\_information\\_form.pdf](http://www.omx-online.com/OMX_sample_information_form.pdf).

To prevent you from unnecessary expenses, our service facility will evaluate the given information about the sample spots to predict the prospects of a successful analysis and contact you in case of difficulties.

### 3.2. Detailed protocol for picking protein spots with OMX-S®

To efficiently use OMX-S® for the analysis of protein bands or spots from 1D and 2D-SDS-PAGE-gels, it is recommended to stain proteins with Coomassie™ blue dyes. For successful MS analysis, it is essential not to fix stained proteins within the gel matrix using e.g. formaldehyde or glutaraldehyde. In order to obtain best results, please send freshly prepared samples.

The following chemicals and laboratory equipment are recommended, but are not supplied:

**Chemicals**

- Water (Molecular Biology Grade, 18 MΩ or equivalent)

**Lab equipment**

- A clean, flat tray for washing the gel  
The tray size depends on the gel volume. Per cm<sup>3</sup> gel, a volume of at least 20 ml water is recommended.
- A clean glass plate
- A light table (optional)
- A clean bench top micro centrifuge suitable for 1.5 ml standard tubes  
The centrifugation parameters are in units of relative centrifugal force (rcf).

**Detailed sample preparation protocol**

#	Description	Detailed instruction	
1	Sample information form	Complete the enclosed sample information form and send it by fax to OMX GmbH (+49-(0)8153 908785-4)	
2	Preparation of the gel	Wash gel slab in water.	2 x 5 min at RT
3		Drip off excessive water and transfer the gel to a cleaned glass plate.	
4	Preparation of the OMX-S®	Take an OMX-S® and label it according to your indications made in the sample information form.	
5	Excision of spots	Detach the Sampler from the Reactor, and put the Sampler on the bottom side of the Reactor.	
6		Excise the protein band or spot of interest with the Picker. After picking, lift picker as shown in Fig. 1.	
6a		Repeat step 4 up to two times if excision of bigger spots is intended.	
7	Crush the gel	Close the OMX-S® by screwing the Sampler back on the picking side of the Reactor. Do not over tighten. Place the OMX-S® in the centrifuge with the Reactor placed at the bottom of the centrifuge. Spin down gel (Fig. 2/2 p. 4)	2 min at rcf 13.000 x g
8		Remove the OMX-S® from the centrifuge and place it into an enclosed PE-bag and send it to OMX GmbH.	

Fig. 1 Illustration of the picking process:

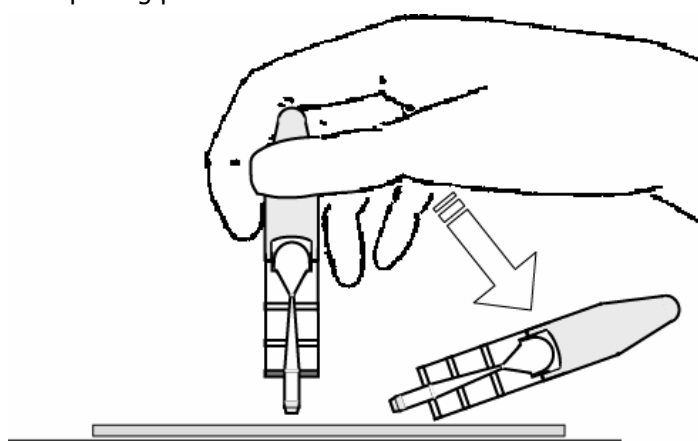
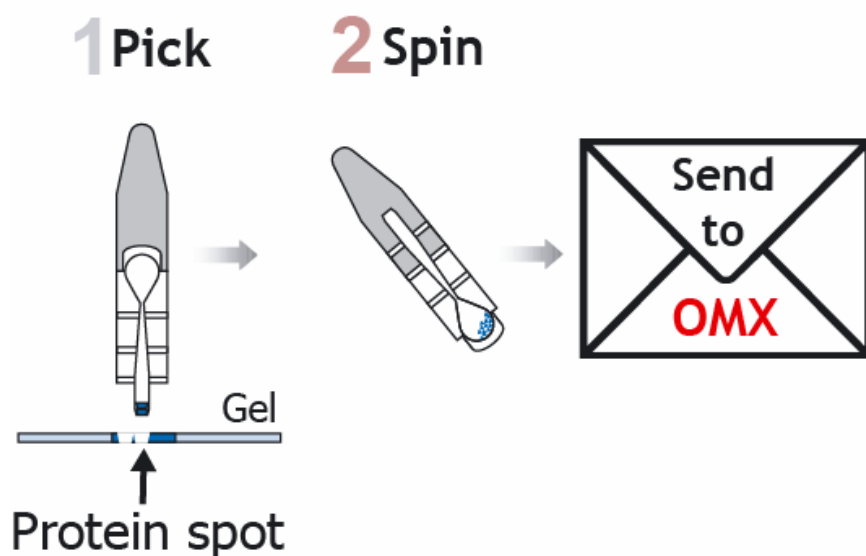


Fig. 2 Flow Chart:



#### 4. Troubleshooting

Problem	Step	Possible Cause	Solution
Gel stays pinned in the picker after centrifugation	5	Centrifugal force too low	Higher rcf value or longer centrifugation time

#### 5. Technical data sheet

OMX-S <sup>®</sup> length:	50 mm
Rotor cavity diameter required:	11 mm
Maximum Reactor volume:	40 µl
Maximum spin speed:	13000 x g
Diameter of picker:	1.8 mm
Materials:	Polypropylen and glass
Storage:	OMX-S <sup>®</sup> should be stored dry and clean at room temperature and protected from UV-light. OMX-S <sup>®</sup> is stable for at least 1 year when stored as described.
Resistance to chemicals:	Resistant to water, diluted acids, short chain alcohols, and acetonitrile. Not resistant to hydrocarbons, arenes, and halogenated hydrocarbons.

#### 6. Ordering information

##### **Manufacturer:**

OMX GmbH

Information and Technical assistance: [www.omx.de](http://www.omx.de)

Adelbergweg 14  
D-82234 Wessling  
Germany

Tel.: +49-(0)8153 908785-3  
Fax: +49-(0)8153 908785-4

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The product is delivered with documentation including specifications and technical information. OMX-S<sup>®</sup> is only for use referring to supplied instruction manual. The information in this manual is provided in all conscience. All specifications are subject to change without prior notice. Conditions of product application are uncontrollable by the manufacturer. Therefore, we do not warrant the suitability of the product for particular use or positive results. The customer or user agrees to all risks and liabilities. OMX GmbH shall not be liable for any loss or direct, incidental, consequential or special damage caused from the use or misuse of the product.

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