

# 3M™ Allergen Protein ELISA Kit Recommended Laboratory Equipment and Materials List

## Introduction

The 3M™ Allergen Protein ELISA Kit is intended for the detection of allergenic proteins in clean-in-place (CIP) final rinse water, environmental swab samples, food ingredients, and processed food products. The 3M Allergen Protein ELISA Kit is intended for use in a laboratory environment by professionals trained in laboratory techniques. Users are responsible for familiarizing themselves with product instructions and information.

This document is a guide to inform users of the additional equipment and materials necessary to conduct testing with 3M Allergen Protein ELISA Kits. It is the users' responsibility to confirm that all equipment and materials meet the necessary performance requirements for their specific laboratory needs. If you have specific questions related to 3M Allergen Protein ELISA Kits, please contact your local 3M Food Safety Sales Representative or call 1-800-328-1671.

## 3M Allergen Protein ELISA Kit Equipment and Materials List

Equipment/Materials	Description and Specifications
Precision pipettor(s)	<p>Precision pipettor(s) for the preparation and transfer of 10, 100, 200, 400, 500, and 900 µL volumes of 3M™ HRP Conjugate, 3M™ Standard Protein Concentrate, 3M™ Diluent, 3M™ Chromogenic Substrate Solution, 3M™ Stop Solution, and for transfer of liquid and clean-in-place (CIP) final rinse water samples.</p> <ul style="list-style-type: none"> <li>VWR® Ultra High-Performance Single Channel Pipettors, Variable Volume, 2-20 µL; Cat # 89130-556 <i>or equivalent</i></li> <li>VWR® Ultra High-Performance Single Channel Pipettors, Variable Volume, 100-1000 µL; Cat # 89130-566 <i>or equivalent</i></li> <li>Fisherbrand™ Elite™ Adjustable-Volume Pipetter, 2-20 µL; Cat # FBE00020 <i>or equivalent</i></li> <li>Fisherbrand™ Elite™ Adjustable-Volume Pipetter, 100-1000 µL; Cat # FBE01000 <i>or equivalent</i></li> </ul>

Sterile pipette tips	<p>Sterile pipette tips compatible with precision pipettor(s) to transfer 10, 100, 200, 400, 500 or 900 <math>\mu</math>L volumes. Filter tips not required.</p> <ul style="list-style-type: none"> <li>• VWR Signature™ Aerosol Filter Pipet Tips, sterile, 1-100 <math>\mu</math>L; Cat # 53510-076</li> <li>• VWR Signature™ Aerosol Filter Pipet Tips, sterile, 100-1000 <math>\mu</math>L; Cat # 16466-008 <i>or equivalent</i></li> <li>• VWR® Plain Pipet Tips, sterile, 100-1000 <math>\mu</math>L; Cat # 83007-380 <i>or equivalent</i></li> </ul>
Precision multi-channel (8 channel) pipettor	<p>Precision multi-channel (8 channel) pipettor to transfer 100 <math>\mu</math>L volumes is recommended if testing more than 8 samples at a time. The precision multi-channel pipettor can be used to transfer 3M HRP Conjugate, 3M Chromogenic Substrate Solution, and 3M Stop Solution utilizing a reagent reservoir.</p> <ul style="list-style-type: none"> <li>• VWR® Multi-Channel Ultra High-Performance Pipettor, Variable Volume, 2-200 <math>\mu</math>L; Cat # 89134-748 <i>or equivalent</i></li> <li>• Fisherbrand™ Elite™ Multichannel Pipette, 30-300 <math>\mu</math>L; Cat # FBE800300 <i>or equivalent</i></li> </ul>
Disposable reagent reservoirs	<p>Disposable reagent reservoirs with 25-50 mL capacity are recommended if testing more than 8 samples at a time and utilizing a precision multi-channel (8 channel) pipettor to transfer 3M HRP Conjugate, 3M Chromogenic Substrate Solution, and 3M Stop Solution.</p> <ul style="list-style-type: none"> <li>• Corning™ Costar™ Sterile Disposable Reagent Reservoir; Cat # 4870 <i>or equivalent</i></li> <li>• ThermoScientific™ Sterile Disposable Reagent Reservoir; Cat # 8095 <i>or equivalent</i></li> </ul>
Disposable conical centrifuge tubes	<p>Disposable conical centrifuge tubes with 15 or 50 mL capacity for protein extraction and capable of withstanding centrifugation at 5000-7000 rpm (3000 g). It is necessary to consider conical tube compatibility with centrifuge and the availability of centrifuge rotor adapters.</p> <ul style="list-style-type: none"> <li>• Thermo Scientific™ Nunc™ 15 mL/50 mL Conical Sterile Polypropylene Centrifuge Tubes; Cat # 339650/339652 <i>or equivalent</i></li> <li>• VWR® Centrifuge Tubes with Flat Caps, Conical-Bottom, Polypropylene, Sterile, Standard Line, 15 mL/50 mL; Cat #10026-076/10026-078 <i>or equivalent</i></li> </ul>

Disposable microcentrifuge tubes	<p>Disposable 1.5 to 2 mL microcentrifuge tubes to dilute 3M Protein Standard Concentrate and to dilute extracted sample with 3M Diluent.</p> <ul style="list-style-type: none"> <li>• VWR® Microcentrifuge Tubes, Polypropylene, 2 mL; Cat # 87003-298 <i>or equivalent</i></li> <li>• Fisherbrand™ Premium Microcentrifuge Tubes: 2.0 mL; Cat # 05-408-138 <i>or equivalent</i></li> </ul>
Tube racks for disposable conical and microcentrifuge tubes	<p>Tube racks to hold disposable 15 or 50 mL conical tubes as well as 1.5 to 2 mL microcentrifuge tubes.</p> <ul style="list-style-type: none"> <li>• VWR® Polypropylene Microcentrifuge Tube Rack; Cat # 20901-675 <i>or equivalent</i></li> <li>• VWR® Reusable Racks for 15 mL/50 mL Centrifuge Tubes; Cat # 89079-514/89079-496 <i>or equivalent</i></li> </ul>
Environmental collection swabs	<p>Sterile environmental collection swabs.</p> <ul style="list-style-type: none"> <li>• Puritan® 6" Sterile Standard Polyester Swab w/Polystyrene Handle; Cat # 25-806 1PD</li> </ul>
Laboratory balance	<p>Laboratory balance to weigh 0.5 g (<math>\pm</math> 0.02 g) of solid samples.</p> <ul style="list-style-type: none"> <li>• VWR® P-Series Portable Balances, 500 g; Cat # 10205-004 <i>or equivalent</i></li> <li>• Fisher Science Education™ Portable Balances, 500 g; Cat # S94792C <i>or equivalent</i></li> </ul>
Disposable weigh dishes	<p>Disposable weigh dishes for weighing solid samples.</p> <ul style="list-style-type: none"> <li>• VWR® Pour-Boat Weighing Dishes; Cat # 10803-160 <i>or equivalent</i></li> </ul>
Metal spatula	<p>Metal spatula to assist with accurately weighing solid samples.</p> <ul style="list-style-type: none"> <li>• VWR® Flat/Spoon Spatulas, Stainless Steel; Cat # 82027-532 <i>or equivalent</i></li> </ul>
Plate sealing film	<p>Adhesive plate sealing film to cover microplate wells to prevent spilling and evaporation during incubation steps.</p> <ul style="list-style-type: none"> <li>• VWR® PCR Sealing Film; Cat # 82018-844 <i>or equivalent</i></li> <li>• Fisherbrand™ Adhesive Plate Seals; Cat # 08-408-240 <i>or equivalent</i></li> </ul>

Laboratory centrifuge	<p>Centrifuge with capability to centrifuge samples at 5000-7000 rpm (3000 g). It is necessary to consider conical tube compatibility with centrifuge and the availability of centrifuge rotor adapters.</p> <ul style="list-style-type: none"> <li>• Thermo Scientific™ Sorvall™ ST 8 Small Benchtop Centrifuge and Rotor Package; Cat # 75200395 <i>or equivalent</i></li> <li>• VWR® Clinical 200 Large Capacity Centrifuge; Cat # 82017-654 <i>or equivalent</i></li> <li>• Ohaus® Frontier™ 5000 Series Multi; Cat # FC5706 <i>or equivalent</i></li> </ul>
Orbital shaker	<p>Orbital shaker with speed adjustable to 400 rpm to shake microwell plates.</p> <ul style="list-style-type: none"> <li>• Boekel Scientific™ 270300 Microplate Shaker; Cat # 270300 <i>or equivalent</i></li> <li>• VWR® Microplate Shaker; Cat # 12620-926 <i>or equivalent</i></li> <li>• Thermo Scientific™ Compact Digital Microplate Shaker; Cat # 88880023 <i>or equivalent</i></li> </ul>
Shaking water bath or shaking incubator	<p>Shaking water bath or shaking incubator to heat samples to 50-60°C with agitation. It is necessary to consider conical tube compatibility with shaking water bath or shaking incubator and the availability of adaptors or racks.</p> <ul style="list-style-type: none"> <li>• Thermo Scientific™ Precision™ Shaking Water Bath; Cat # TSSWB15 <i>or equivalent</i></li> <li>• VWR® Shaking Water Bath; Cat # 10128-126 <i>or equivalent</i></li> <li>• VWR® Incubating Orbital Shaker, Model 3500I; Cat # 12620-946 <i>or equivalent</i></li> <li>• Corning™ LSE™ Benchtop Shaking Incubator; Cat # 6790 <i>or equivalent</i></li> <li>• Fisherbrand™ Incubating Mini-Shaker; Cat # 02-217-753 <i>or equivalent</i></li> </ul>
Laboratory grinder or blender	<p>Laboratory grinder or blender to grind solid samples into a homogenous powder.</p> <ul style="list-style-type: none"> <li>• Waring® WSG30 Commercial Heavy-Duty Electric Spice Grinder; Cat # WSG30 <i>or equivalent</i></li> <li>• Waring® WSG60 Wet/Dry Power Grinder; Cat # WSG60 <i>or equivalent</i></li> </ul>

Volumetric graduated cylinders	Volumetric graduated cylinders to prepare 1X solutions of 3M™ Extraction Buffer, 3M Diluent, and 3M™ Wash Solution. Assorted volumetric cylinders may be required depending on the volume of reagents prepared.
Polystyrene or glass bottles	Polystyrene or glass bottles to store 1X solutions of 3M Extraction Buffer and 3M Wash Solution.
Polyethylene wash bottle	<p>Polyethylene wash bottle to store 1X 3M Wash Solution for manual washing of ELISA plate.</p> <ul style="list-style-type: none"> <li>• VWR® Wash Bottle, 250 mL; Cat # 414004-226 <i>or equivalent</i></li> <li>• Fisherbrand™ Translucent White Wash Bottle, 500 mL; Cat # 03-409-22C <i>or equivalent</i></li> </ul>
Microplate absorbance reader and data reduction software	<p>Microplate absorbance reader for reading absorbance of microwell plates at 450 nm and data reduction software capable of generating a four-parameter logistic curve fit to construct a standard curve.</p> <ul style="list-style-type: none"> <li>• BioTek® ELx808™ Absorbance Microplate Reader; Cat # ELx808 <i>or equivalent</i></li> <li>• BioTek® 800™ TS Absorbance Reader; Cat # 800 TS <i>or equivalent</i></li> <li>• Awareness Technology, Inc. Stat Fax® 4200 ELISA Microplate Reader; Cat # Stat Fax 4200 <i>or equivalent</i></li> <li>• Awareness Technology, Inc. Stat Fax® 4700 ELISA Microwell Strip Reader; Cat # Stat Fax 4700 <i>or equivalent</i></li> <li>• Awareness Technology, Inc. ChroMate® 4300 PC ELISA Microplate Reader; Cat # ChroMate 4300 <i>or equivalent</i></li> </ul>
Automatic microplate washer	<p>Automatic plate washer with 96 well plate capacity and ability to aspirate followed by 4 wash cycles. Manual washing of microwell plates with a wash bottle is also acceptable.</p> <ul style="list-style-type: none"> <li>• BioTek® 405 TS Washer; Cat # 405 TS <i>or equivalent</i></li> <li>• BioTek® 405 LS Washer; Cat # 405 LS <i>or equivalent</i></li> <li>• BioTek® 50 TS Washer; Cat # 50 TS <i>or equivalent</i></li> <li>• Awareness Technology, Inc. Stat Fax® 2600 Programmable Microwell Plate Washer; Cat # Stat Fax 2600 <i>or equivalent</i></li> </ul>



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