



HALAL WATCH WORLD

THE **GOLD** STANDARD



PRODUCT & FACILITY REPORT

Applied Biomimetic Inc

Table of Contents

CERTIFICATION CONSIDERATIONS	5
1. Is the product/ingredient Halal Aslan (by default)?.....	5
2. Is the product/ingredient Halal certified via another organization?	5
3. Are there any impermissible ingredients being produced in the same facility?	5
4. Are there any contents in the product that contain impermissible ingredients?	6
Client Details: Applied Biomimetic Inc	7
FACILITY PROFILE.....	7
PRODUCT INFORMATION	8
PRODUCT PROFILE.....	9
CLEANING METHOD.....	11
PRODUCT & SUPPLIER ASSESSMENT	12
BASF.....	12
Huntsman	12
Brenntag Northeast, LLC (Taminco Prod site)	13
Hirose	14
Acidchem Sdn. Bhd.....	15
Ashland	15
Schweitzer-Mauduit International, Inc. (SWM)	16
MBK tape Solution.....	17
Hornwood or Guilford.....	18
Henkel Corporation	18
Dykem	19
Custom Boxes Now	20

Pacific Packaging.....20
TESTING METHOD21
CONCLUSION.....22

COMPANY BACKGROUND

Halal Watch World LLC is a halal certification limited liability corporation based in the state of New York, and has operated in the certification industry since 1990. HWW is an organization that stands upon the trust of the Muslim public, and believes that it is imperative that their trust never be jeopardized. We maintain standards to the highest degree of scrutiny and perform regular audits for the protection of our constituents.

Halal Watch World understands that halal certification is a communal obligation (فرض كفاية), meaning, at least one person of the community must uphold it. If no one takes up this responsibility, the entire community bears a burden of sin. Therefore, we must be extra diligent with this effort. We realize the seriousness of the matter and understand the dire consequences of not filling this duty to the fullest capacity. God explains this to us in the Holy Quran by His statement:

“ And say not concerning that which your tongue says falsely: 'This is Halal and this is Haram,' so as to invent lies against Allah. Verily, those who invent lies against Allah will never prosper...A passing brief enjoyment (will be theirs), but they will have a painful torment.”

[Al Quran] 16:116-117

HWW ensures to the best of its ability a high level of authenticity is upheld. This allows them to gain the trust of the Muslim community, and garner strong relationships with companies who produce, process, and distribute halal products at all levels. By this, they are able to offer halal producing company's guidance and consultation on the direction of their processes and products, while ensuring that Islamic dietary standards are always maintained and monitored. Muslims can use this information in order to make well informed decisions about what they choose to eat.

Legal Filings: Halal Watch World holds registered trademark number 4728733, and Department of State (New York) number 4814343. Halal Watch World is also a registered halal certifying organization with The Department of Agriculture and Markets of New York State (See supporting documentation).

We begin in the name of God SWT



CERTIFICATION CONSIDERATIONS

There are 4 main factors taken into consideration when determining the halal status of a product:

1. Is the product/ingredient Halal Aslan (by default)?

If the product is Halal by default, then the location it is harvested, produced, or manufactured in, even if done so by a non-Muslim, is not necessary to inspect.

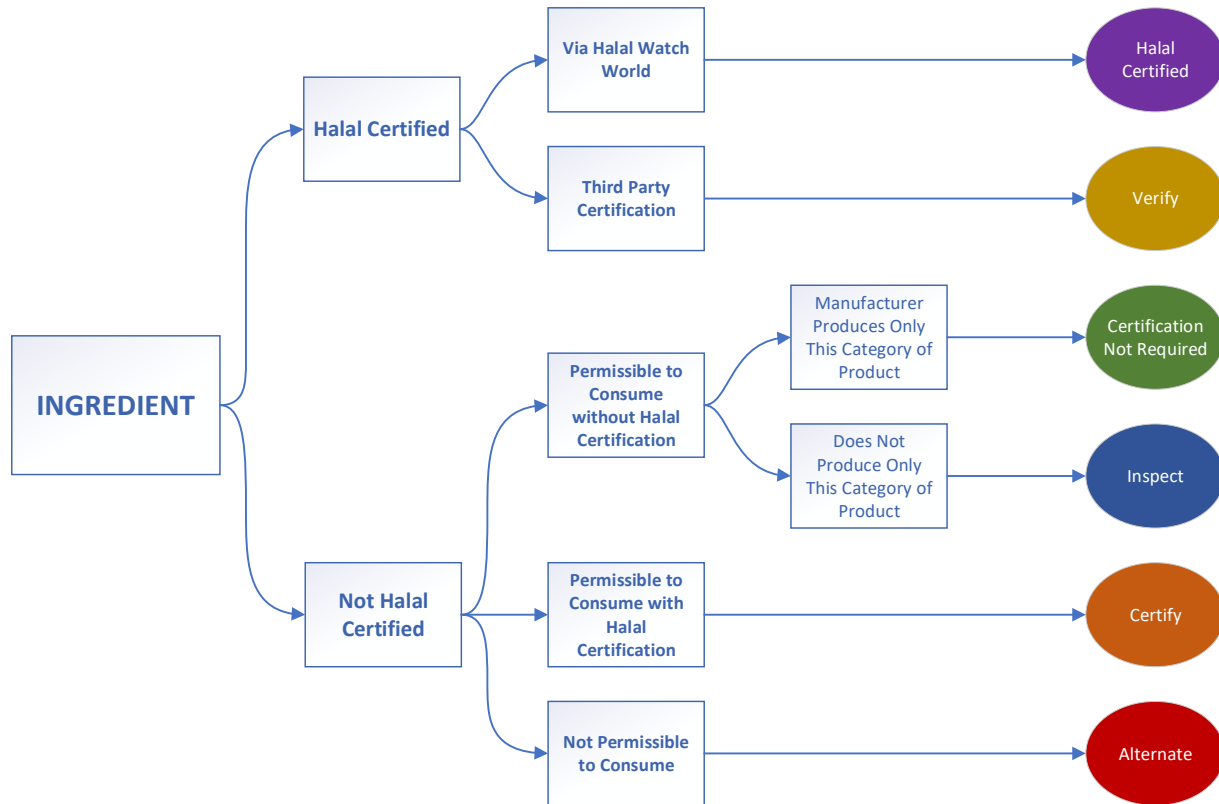
2. Is the product/ingredient Halal certified via another organization?

If another organization certifies the product as Halal, then it is incumbent upon us to perform a *tahqeeq* (verification) certification of the establishment. We must be able to ascertain that the certifying body is competent and capable of determining the status of such products. In the event that we are unable to gain this information, our organization must inspect the location of production before certifying.

3. Are there any impermissible ingredients being produced in the same facility?

As is the norm in Muslim minority societies, manufacturers produce both Halal and Non-Halal products in the same facilities. If other non-Halal items are produced in the same facility, an inspection may be required. In the event that an inspection is not possible, Halal Watch World reserves the right to utilize other forms of off-site audit procedures requiring documentation and the like in order to determine the facilities halal production capabilities. It is generally required for us to determine that the manufacturer prevents the following:

1. Product Contamination
2. Cleaning Method fulfils Islamic requirements
3. Separate storage locations between Halal and non-Halal products, or preventative measures are in place to remove the possibility of mislabelling
4. Halal certified label is visible either on the box or the product
5. Halal certificate from source meat supplier is valid



Regarding contamination, products cannot be cooked upon or within the same utensils without proper cleansing. This means that any liquid substance that interacts with non-halal products becomes contaminated. This includes oil, and other wet cooking surfaces. Thus, if a vat of oil is used to cook non-halal products (which is considered as filth), it cannot be used to cook Halal products without contaminating it.

4. Are there any contents in the product that contain impermissible ingredients?

We refer to the list of impermissible consumables on the previous pages. If the product under audit is found to contain any of the ingredients on the ban list, these products cannot be considered as halal.

Client Details: Applied Biomimetic Inc

FACILITY PROFILE

Applied Biomimetic focuses on the convergence of polymeric and protein science to design high performance membranes for high value fluids. We are a leader in primary research in membrane proteins, and an innovator in polymeric casting chemistry and production methods.

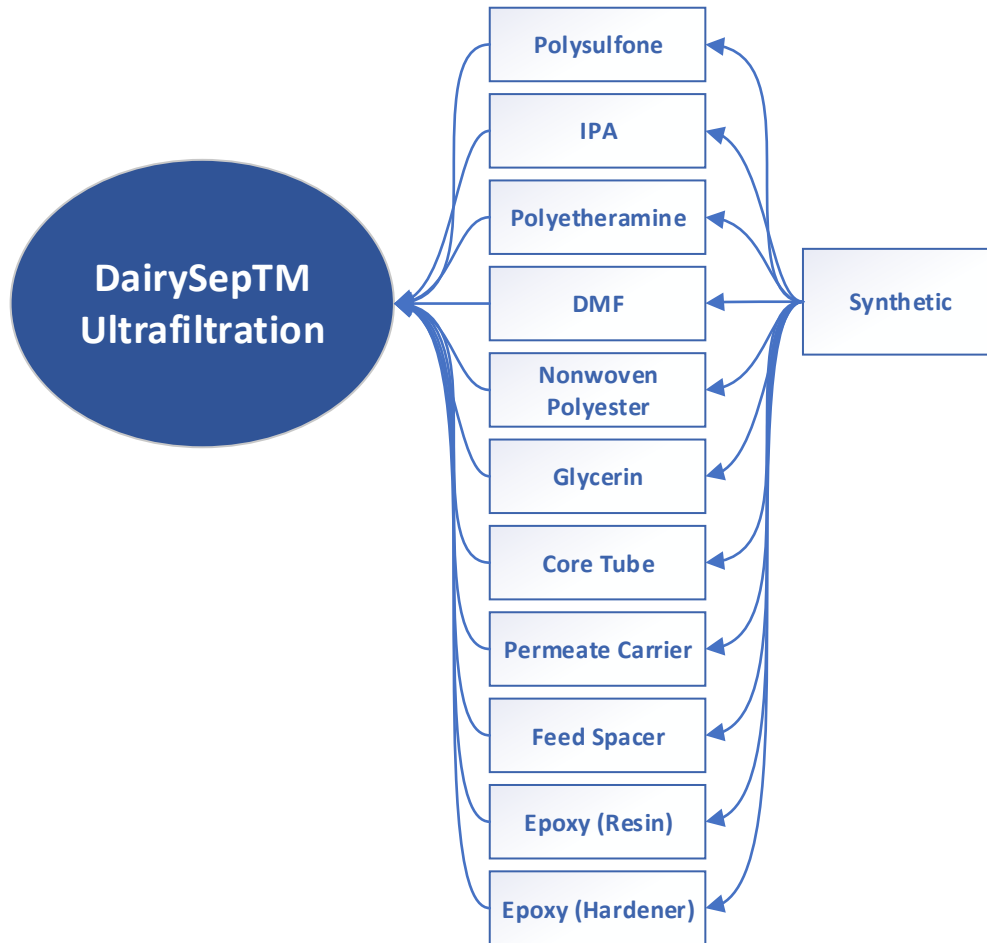
Client Details	
GENERAL INFORMATION	
Physical Address:	50 West Watkins Mill Rd, Gaithersburg, MD 20878
Area of site:	13600 sq. ft.
Number of employees:	35
Number of working shift:	1
Operating Hours:	7am-6pm
Work Days:	Mon-Fri
Total Numer of Products:	1
Total Number of Ingredients:	19
FACILITY OVERVIEW	
Risk Assessment	Low Risk
Facility Kind	HPF - Totality
Contaminants	No
Tools	Dedicated
Storage	Segregated
SUPPLIER OVERVIEW	
Supplier1:	BASF
Supplier2:	Huntsman
Supplier3:	Brenntag Northeast, LLC (Taminco Prod site)
Supplier4:	Hirose
Supplier5:	Acidchem Sdn. Bhd.
Supplier6:	WSSC
Supplier7:	Ashland
Supplier8:	Schweitzer-Mauduit International, Inc. (SWM)
Supplier9:	MBK tape Solution
Supplier10:	Hornwood or Guilford
Supplier11:	SWM
Supplier12:	Henkel Corporation
Supplier13:	Dykem
Supplier14:	Custom Boxes Now
Supplier15:	Pacific Packaging
PRODUCT OVERVIEW	
Product Type:	Filtration
Exposure:	Goods are opened in facility
Animal Byproducts:	No
Alcohol (Ethyl):	No

PRODUCT INFORMATION

Product name	Client product #	HWW Product ID	Ingredients List
DairySep™ Ultrafiltration Element		MR1038-AC01	Polysulfone, IPA, Polyetheramine, DMF, Nonwoven Polyester, Glycerin, Water, PVP, Core tube, Tape, Permeate, Carrier, Feed Spacer, Epoxy (Resin) UK178A, Epoxy (Hardener) UK178B, Marker, Outerwrap, Box, Bag, Foam Pouch

PRODUCT PROFILE

DairySep™ Ultrafiltration Element



DAIRYSEP™ ULTRAFILTRATION ELEMENT

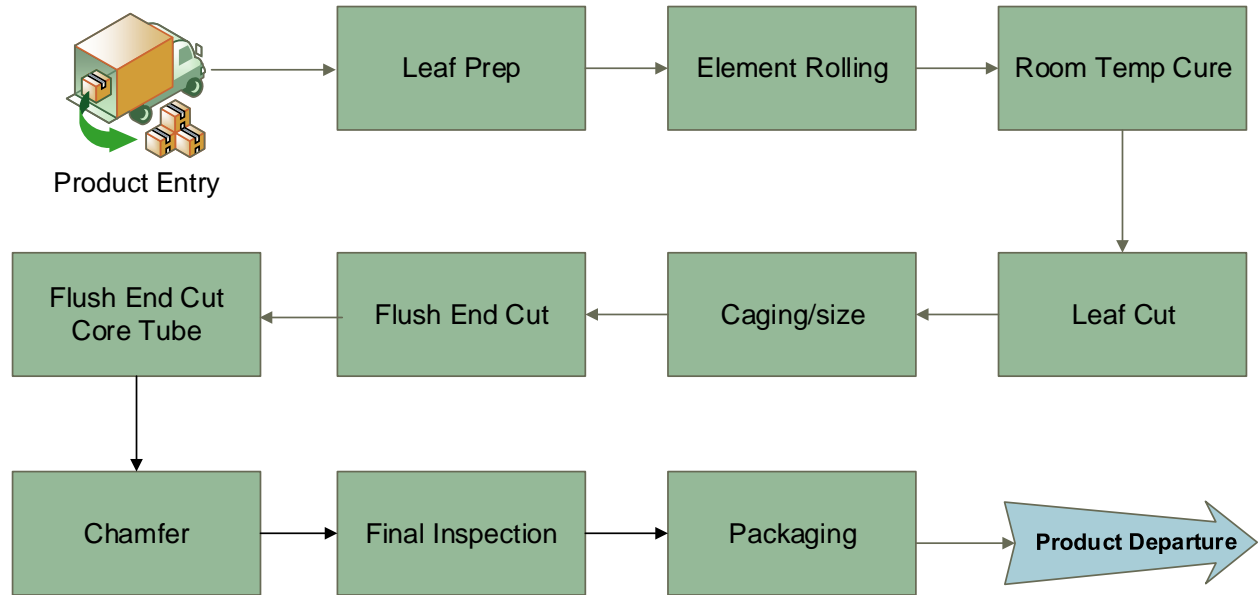
The AB DairySep™ UF Dairy series membranes and elements achieve superior protein rejection and permeability when compared to standard industry membranes. The DairySep™ performance is a result of a combination of advanced chemistry formulations and novel membrane fabrication techniques.

Concerns – IPA or Isopropyl Alcohol an alcohol of sorts but it is confirmed that it is not found in the product and is only used in the manufacturing process of the product. Furthermore, the final product is not a consumable. It is a filtration device and would in no way end up intoxicating it's user when used.

DMF or Dimethylformamide is supplied by a facility that produces alcohol in the same production line but the contamination is extremely minute and negligible. We have a

technical spec document for the product that shows it's purity is 99.8% and any contaminants would be 0.2% or below.

PROCESSING OVERVIEW



CLEANING METHOD

Description: Applied Biomimetic has hired the professional cleaning services of 'Sweeney Cleaning Services'.

Frequency: Daily.

PRODUCT & SUPPLIER ASSESSMENT

BASF

Raw Material	Ingredient description	Concerns	Pass/Fail	Reason	Status Recommendation
Polysulfone	Polysulfones are a family of high performance thermoplastics. These polymers are known for their toughness and stability at high temperatures. Technically used polysulfones contain an aryl-SO ₂ -aryl subunit.		Pass		Halal Aslan

Huntsman

Raw Material	Ingredient description	Concerns	Pass/Fail	Reason	Status Recommendation
Polyetheramine	Polyetheramine is used as curing agents to enhance the property for epoxy adhesives as well as epoxy resin composites. The polyetheramine added improves the fatigue resistance & burst strength of the composites.		Pass		Halal Aslan

Brenntag Northeast, LLC (Taminco Prod site)

Raw Material	Ingredient description	Concerns	Pass/Fail	Reason	Status Recommendation
DMF	Dimethylformamide is an organic compound with the formula (CH ₃) ₂ NCH. Commonly abbreviated as DMF, this colourless liquid is miscible with water and the majority of organic liquids. DMF is a common solvent for chemical reactions.		Pass		Halal Aslan

Raw Material	Ingredient description	Concerns	Pass/Fail	Reason	Status Recommendation
IPA	Isopropyl alcohol is a colorless, flammable chemical compound with a strong odor. As an isopropyl group linked to a hydroxyl group, it is the simplest example of a secondary alcohol, where the alcohol carbon atom is attached to two other carbon atoms. It is a structural isomer of 1-propanol and ethyl methyl ether.	Is alcohol.	Pass	Only used in manufacturing process.	Halal Shartan

Hirose

Raw Material	Ingredient description	Concerns	Pass/Fail	Reason	Status Recommendation
Nonwoven Polyester	<p>Nonwoven fabric is a fabric-like material made from staple fibre (short) and long fibres (continuous long), bonded together by chemical, mechanical, heat or solvent treatment. The term is used in the textile manufacturing industry to denote fabrics, such as felt, which are neither woven nor knitted. Some non-woven materials lack sufficient strength unless densified or reinforced by a backing. In recent years, non-wovens have become an alternative to polyurethane foam.</p>		Pass		Halal Aslan

Acidchem Sdn. Bhd.

Raw Material	Ingredient description	Concerns	Pass/Fail	Reason	Status Recommendation
Glycerin	Glycerol is a simple polyol compound. It is a colorless, odorless, viscous liquid that is sweet-tasting and non-toxic. The glycerol backbone is found in those lipids known as glycerides. Due to having antimicrobial and antiviral properties it is widely used in FDA approved wound and burn treatments.		Pass		Halal Aslan

Ashland

Raw Material	Ingredient description	Concerns	Pass/Fail	Reason	Status Recommendation
PVP	Polyvinylpyrrolidone, also commonly called polyvidone or povidone, is a water-soluble polymer made from the monomer N-vinylpyrrolidone.		Pass		Halal Aslan

Schweitzer-Mauduit International, Inc. (SWM)

Raw Material	Ingredient description	Concerns	Pass/Fail	Reason	Status Recommendation
Core tube	SWM manufactures an extensive line of Coretec™ profile extrusion products. Our high-end tubing, rods, pipes, and open-profile shapes are designed to meet aggressive requirements related to temperature, chemicals, moisture, and other extremes		Pass		Halal Aslan
Feed Spacer	Feed spacers are used in spiral wound reverse osmosis (RO) membrane modules to keep the membrane sheets apart as well as to enhance mixing. They are beneficial to membrane performance but at the expense of additional pressure loss.		Pass		Halal Aslan

Outerwrap	Outerwrap HTPP is a highly flexible UV-resistant tape, providing excellent resistance of the complete coating system to impacts, indentations and abrasion, as well as resistance against the influences from various chemicals. backing. Provides excellent impact and indentation resistance.		Pass		Halal Aslan
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MBK tape Solution

Raw Material	Ingredient description	Concerns	Pass/Fail	Reason	Status Recommendation
Tape	Adhesive tape refers to any one of a variety of combinations of backing materials coated with an adhesive. Different backing materials and adhesives can be used depending on the intended use.		Pass		Halal Aslan

Hornwood or Guilford

Raw Material	Ingredient description	Concerns	Pass/Fail	Reason	Status Recommendation
Permeate Carrier	The permeate carrier fabric is placed between layers of the membrane and acts as a pipe to allow the permeate to flow between the adjacent membranes and exit from the element. ... The spacer fabric is used between each layer of composite.		Pass		Halal Aslan

Henkel Corporation

Raw Material	Ingredient description	Concerns	Pass/Fail	Reason	Status Recommendation
Epoxy (Resin) UK178A	Epoxy refers to any of the basic components or cured end products of epoxy resins, as well as a colloquial name for the epoxide functional group. Epoxy resins, also known as polyepoxides, are a class of reactive prepolymers and polymers which contain epoxide groups.		Pass		Halal Aslan

Epoxy (Hardener) UK178B	Hardeners are used to cure epoxy resins. However, simply adding a hardener to an epoxy resin may not cause the epoxy mixture to cure quickly enough. If this is the case a different hardener may be required. Also, hardeners with certain additives can be used		Pass		Halal Aslan
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Dykem

Raw Material	Ingredient description	Concerns	Pass/Fail	Reason	Status Recommendation
Marker	A marker pen, fineliner, marking pen, felt-tip pen, flow marker, vivid, texta, sketch pen or koki, is a pen which has its own ink source and a tip made of porous, pressed fibers such as felt. A permanent marker consists of a container and a core of an absorbent material. This filling serves as a carrier for the ink.		Pass		Halal Aslan

Custom Boxes Now

Raw Material	Ingredient description	Concerns	Pass/Fail	Reason	Status Recommendation
Box	Box describes a variety of containers and receptacles used for the permanent storage or temporary transportation of its contents. The size of a box may vary, from the very smallest to the size of a large appliance, and can be used for a variety of purposes ranging from the functional to the decorative.		Pass		Halal Aslan

Pacific Packaging

Raw Material	Ingredient description	Concerns	Pass/Fail	Reason	Status Recommendation
Bag	A bag is a common tool in the form of a non-rigid container. The use of bags predates recorded history, with the earliest bags being no more than lengths of animal skin, cotton, or woven plant fibers, folded up at the edges and secured in that shape with strings of the same material.		Pass		Halal Aslan

Foam Pouch	Foam pouches are Non-abrasive, polyethylene air foam cut and sealed to form a convenient light-weight bag. ...		Pass		Halal Aslan
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TESTING METHOD

None specified.

CONCLUSION

Client was cooperative, compliant with on-site access, and all relevant documentation requests. Inspector was able to identify all critical Halal Area Risk Management locations. All H.A.R.M. areas have been properly mitigated. All source materials have been analysed during this review. Applied Biomimetic Inc's facility has been deemed to be conducive to maintaining the integrity of a Halal product.

Based upon this information, the review team hereby certifies both the facility, and all products mentioned in this report to be Halal.

REVIEW AGENT:

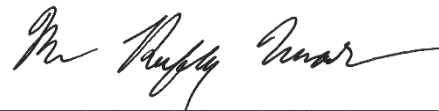


Tameem Allie
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Sh. Darweesh Muhammad
Director of Operations



Imam Mansoor Rafiq Umar
President

Date: Tuesday, 08 June 2021