

Innovation Drives Food Industry

PhosFree MPT80



Foodchem International Corporation

If you are in meat,

MPT80 helps you maximize your profit



COMPANY INTRODUCTION

We are the Foodchem specialist and manufacturer located in China. With our long experience and our break-through technology in meat Processing for more than 10 years, we have developed the Special Meat Additive “**MPT80**” which could overcome the obstacles where the Phosphate compound could not.

“MPT80” INTRODUCTION

After the long intensive research and development , “**MPT80**” has become the better alternative for all kinds of Meat Industry Processing. “**MPT80**” provides the same chemical reaction as polyphosphate in Meat Industry, however it gives you the significant advantage concerning about phosphate residue in finished products. Meanwhile, after repeated and thorough trials, the results proved that “**MPT80**” is far more efficiency than Phosphate compound by Improving taste, Preserving appearance, Preserving color/texture and the most important benefit is *Increasing more yield!*

THE SUCCESSFUL STORY OF “MPT80”

“**MPT80**” has been introduced in Chinese Meat Business since early of year 2018, after only 2 year, “**MPT80**” has gained the most acceptance by most of Meat Processors (especially for Beef and Chicken processing) in China. Within only 2 years, “**MPT80**” sales turnover is increased rapidly.

MAKE A TRIAL, YOU CAN SEE THE DIFFERENCE

The “Phosphate” time should have already been passed, while “Non-Phosphate” has come to be the close attention by meat processors. “**MPT80**” is the best alternative among “non-phosphate” because “**MPT80**” could show the benefit difference ; moreover “**MPT80**” is provided in very easy and convenient usage application.



SPECIFICATION

PRODUCT NAME : PhosFree MPT80

SPECIFICATION :

Description	Specification
Appearance	White Powder
pH (1% Solution)	8.5 – 8.8
Solubility	Complete
Heavy Metal, as Pb	10 ppm max.
Arsenic(mg/kg)	2 ppm max.
Lead(mg/kg)	2 ppm max.
Phosphorous Pentaoxide	None
Add amount	0.5%-1.5%(meat) 0.5%-4.0%(seafood)

TABLE 1: COMPARISON TABLE (MPT80 / PHOSPHATE COMPOUND)

NO.	DESCRIPTION	MPT80	PHOSPHATE COMPOUND
1	Increasing Weight	10-50%	10-12%
2	Reduce Cook Loss	Good	Good
3	Reduce Drip Loss	Good	Good
4	Reduce Freeze Loss	Good	Good
5	Taste	Natural	Bitter Taste
6	Appearance (for cooked item)	Look Natural	Transparency(look like not ready cooked)
7	Preserving Color	Look Good	Moderate
8	Preserving Texture	Natural	Un-natural (Crispy)
9	EU Import Regulation	Passed	Not Allowed (Seafood)
10	USFDA Import Regulation	Passed	Limited P ₂ O ₅ (not more than 0.5%)



Improve the texture and make the meat more tender



Increase yield rate and keep body fluids from losing



Greatly reduce the amount of starch used, and reduce the texture of the product



Improve the taste and make the taste closer to natural



All natural ingredients to ensure consumer health

MPT80 not only does not contain sulfide and phosphate compounds, but also does not contain any ingredients that may cause allergies and genetically modified substances. All ingredients of **MPT80** are food-grade natural raw materials.

MPT80 not only provides the same effect as phosphate in terms of water retention and weight gain, but also saves you from worrying about excessive phosphate residues in the final product test. It also *increases yield*. It has more advantages than phosphate compounds. After repeated in-depth tests, **MPT80** has an absolute leading advantage in ensuring product quality.

MPT80 will not only help you improve product quality and profit, but also ensure the health and safety of consumers, and it can also allow your products to be exported to the United States, Japan and the European Union smoothly and safely!

APPLICATION

(1) RAW SHRIMP

PRODUCT : MPT80

PREPARATION ::

1. Pour 4-kgs MPT80 into 80 liters of clean water .
2. Added 2-3% of salt in accordance with required taste.
3. Stir continuously until completely dissolved.
4. Maintaining the temperature of the solution at about 5-7 Degree Celsius before usage by adding ice 20-30 kgs.

APPLICATION :

1. Proper preparation for solution (see above preparation process)
2. Dipping 100 kgs shrimp into the tank : the dipping time is are vary as following :

SIZE	HOURS
16/20 up	3.5
21/25	3.0
26/30	2.5
31/40	2.5
41/50	2.0
51/60 down	2.0

Remark : Since MPT80 is non-phosphate compound, so please feel free about the ${}_{2}P O_{5}$ residue exceeding 0.5% as per Codex Standard limit.

You are able to increase more yield by increasing the dipping time to obtain the optimum result.

3. During dipping time, it is recommended to stir the shrimp meat continuously. and *must be maintaining the solution temperature* at 5-7 Degree Celsius all the dipping time.

4. Recommended : In case of Block Frozen type, to minimizing the Freeze Loss, it is recommended to prepare MPT80 : 0.5% solution filling into the shrimp block instead of using pure water.

BENEFIT :

1. Increasing weight after dipping about 10-15%
2. Minimizing the Freeze Loss (Drip Loss) (Weight loss after defrost)
3. Appearance/Texture/Color : Look Natural (Look better than using Phosphate compound)

ANALYSIS : Please uses THE TABLE 2 as the standard analysis method.

TABLE 2 : THE ACTUAL EXPERIMENT ON BLACK TIGER SHRIMP

No.	Treatment	Weight Before Dipping (Kgs)	Weight After Dipping (Kgs)	Gain Wt. After Dipping (%)	Count/lb.		P ₂ O ₅ Residue (%)	Appearance
					Bef. Dipping	Aft. Dipping		
1	Control	100	100	0	39-40	39-40	0.25-0.35	Natural
2	Polyphosphate (3 hours)	100	110	10	43	39	> 0.50	Transparency
3	MPT80 (3 hours)	100	111-112	11-12	44	39	0.25-0.35	Look Natural
4	MPT80 (4 hours)	100	113-115	13-15	45	39	0.25-0.35	Look Natural

Remark :

1. Used 4% of the Chemical plus 1% - 2% of Sodium Chloride,
2. Keep the temperature of Solution : 5-7 degree C. during time ; and continuously Stirred.



APPLICATION

(2)Chicken

Application of MPT80 in Chicken

Usage: water retaining agent for chicken products.

Product features: food grade white particles, soluble in water, according to the recommended dosage.

Scope of application: Chicken.

Product function: Phosphate free water retaining agent can effectively improve the elasticity and taste of chicken, and the yield of chicken can be significantly improved.

Application effect: after using this product, it can improve the taste of chicken, increase its elasticity, effectively improve the texture of chicken, increase the moisture content of chicken and increase the yield.

Product advantages and value to customers



Applied to frozen conditioning products, strong water absorption effect, high yield, and lower cost



No peculiar smell, does not change the flavor of the applied product, natural taste



Used in conditioning products, good fluffing effect, no shrinkage when fried at high temperature, good shape maintenance



Good stability

Application comparison

No.	Chicken breast	Water	Aquasorb	Aquasorb/Gross weight
1	300g	120g	1.26g	0.4%
2	245g	98g	3.43g	1.0%
3	330g	132g	1.39g	0.4%

1. Increase yield and keep nutrition.
2. Improve muscle texture, improve taste, make meat more fresh and tender, taste closer to nature.
3. Greatly reduce the number of microorganisms in the product, prevent freeze drying and discoloration.
4. Prevent the release of chicken protein slurry, and do not shrink after frying;
5. Expanded volume, good appearance, water and oil retention.



Application process

Reference recipe for chicken fillet:

Material	Chicken	MPT80	Marinade	Marinade	Water	Total
<i>Quantity/kg</i>	<i>1000</i>	<i>16</i>	<i>127</i>	<i>57</i>	<i>500</i>	<i>1700</i>
<i>Proportion</i>	<i>58.82%</i>	<i>0.94%</i>	<i>7.47%</i>	<i>3.35%</i>	<i>29.41%</i>	<i>100%</i>



Raw material processing: fresh or frozen chicken breasts are thawed naturally (ambient temperature $\leq 12^{\circ}\text{C}$): cutting: cut into chicken

Vacuum tumbling: temperature $6-8^{\circ}\text{C}$ Rc method Total rolling 60min Vacuum deg 0.08Mpa Rotating speed 6r/min



Marinating: 12-16 hours; temperature: $4-6^{\circ}\text{C}$; placing on a plate, quick freezing



APPLICATION

(3)Beef/Pork

How to use MPT80 in animal meat products:

Application: water retaining agent for animal meat products.

Product features: food grade white particles, soluble in water, add according to the recommended amount.

Scope of application: beef and other animal meat.

Product function: phosphorus water retaining agent can effectively improve the elasticity and taste of beef, and the yield of beef can be increased by 15% - 30%.

Application effect: after using this product, it can improve the taste of beef, increase its elasticity, effectively improve the texture of beef, increase the water content of beef and increase the yield.

Usage and dosage:

operation steps: rolling, cold storage

1. Thawing of cattle/pork.
2. Make soaking solution.
3. Mpt80, add 1.0% - 2.0% according to the weight of beef/pork, add appropriate amount of water (temperature 5 °C - 10 °C).
4. Refrigeration treatment.
5. Refrigerated curing (refrigerated temperature 0 °C - 10 °C, refrigerated time 12-16 hours).
6. Remove the raw material from the soaking solution and wash it with water.
7. Suitable for all kinds of cooking and freezing.

This product is white granular and dissolves quickly in cold water

Application of MPT80 in water retention of steak

Usage method:

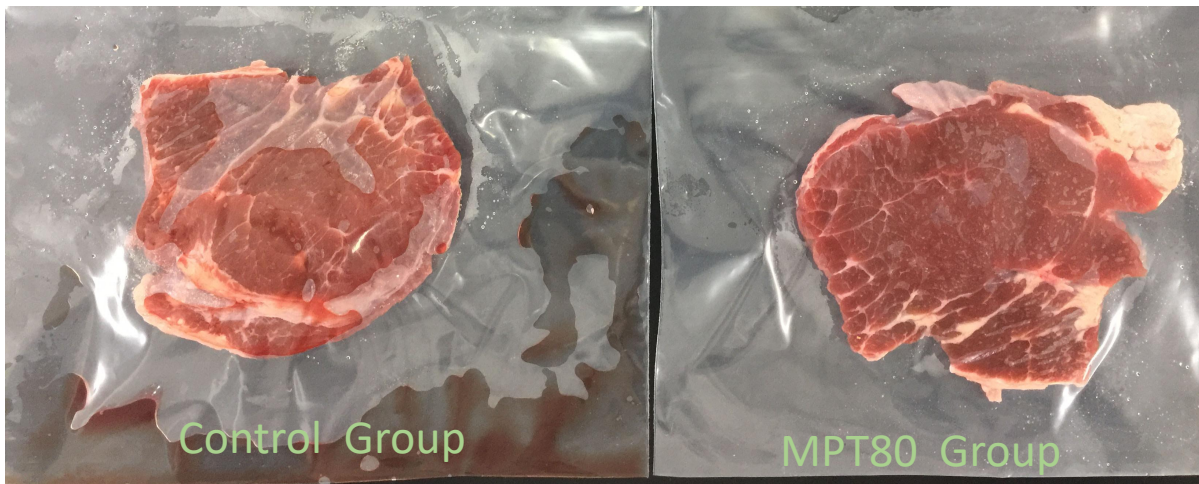
Soak the steak in a well prepared solution before one night.

Salt dosage: 1% of the weight of steak

MPT80 dosage: 2% of the weight of steak

Weight of solution: same weight of steak

Test category	Original weight	Weight after frying	Loss rate
<i>Control Group</i>	<i>147.13g</i>	<i>115.76g</i>	<i>21.32%</i>
<i>MPT80 Group</i>	<i>145.13g</i>	<i>133.46g</i>	<i>8.04%</i>



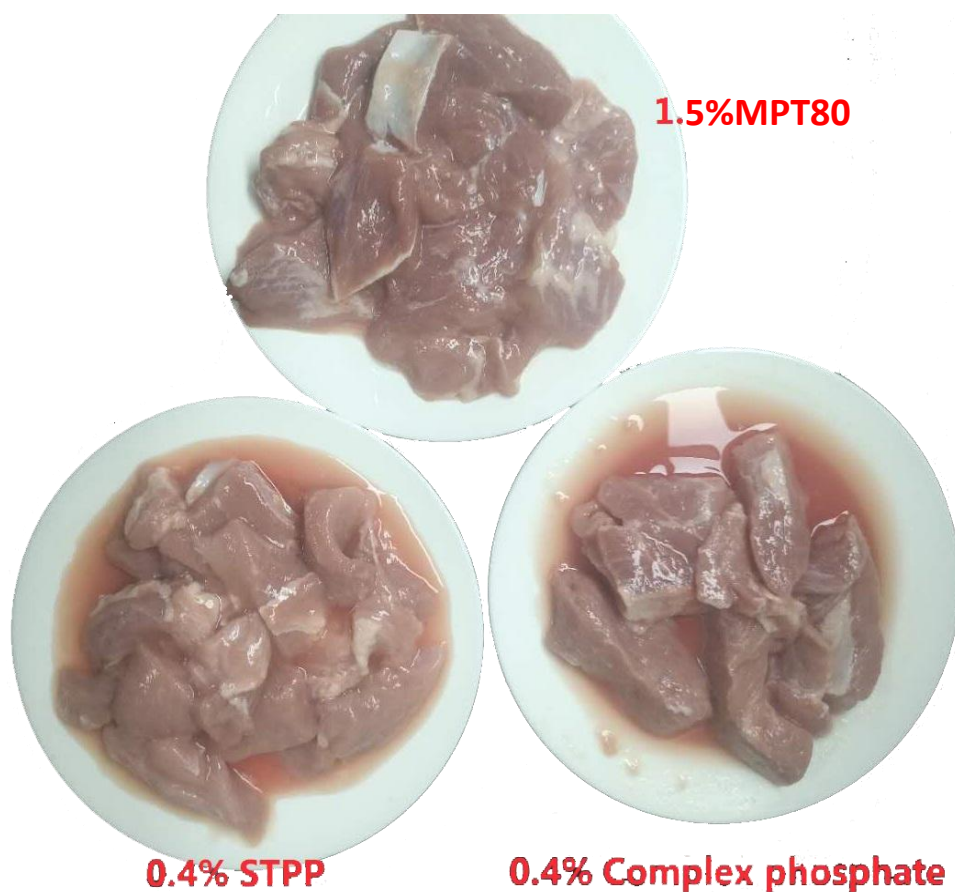
Difference between non phosphorus water retaining agent and phosphate water retaining agent

A. The addition amount is different

According to the national regulations, the phosphorus content of the finished product should not exceed 0.5%. Because the ingredient formula of non phosphorus water retaining agent does not contain phosphate, the addition amount can be appropriately increased to ensure the full absorption of water and the yield of the finished product.

B. The range of adaptation is different

Because of its structural characteristics, non phosphorus water retaining agent is suitable for conditioning products, and its taste is relatively bulky, so it is not suitable for tight meat products processing. In contrast, phosphate has a wider range of applications.



MATERIAL SAFETY DATA SHEET

PRODUCT NAME :PhosFree MPT80

HAZARDS : No known hazards

FIRST AID MEASURES : Flush affected parts with plenty of water

FIRE-FIGHTING MEASURES : All types of extinguisher can be used

ACCIDENTAL RELEASE MEASURES : After spillage collect solids and flush with water.

HANDLING : Minimize dust formation

STORAGE : Protect from contamination.

Store in original,

Unopened packages in clean, cool, dry place.

Store one pallet high to avoid compaction.

PERSONAL PROTECTION : Respiratory Protection : Dust Mask

Eye Protection : Goggles of safety glasses

Hand Protection : Gloves