

# BotanicalsPlus

## BP-Mlfruit Extract in AQ

Natural Source of Alpha Hydroxy Acids



**INCI Name:** Water & Vaccinium Myrtillus Fruit Extract & Saccharum Officinarum (Sugar Cane) Extract & Acer Saccharum (Sugar Maple) Extract & Citrus Aurantium Dulcis (Orange) Fruit Extract & Citrus Limonum (Lemon) Fruit Extract



### Key Benefits:

- 100% Natural Ingredients
- Natural source of AHAs from botanical extracts
- Maximum efficacy with minimum irritancy
- 55% active at a pH ~ 4.0
- Promotes healthy scalp (cell renewal)
- Promotes skin radiance

### Background:

Formulations containing hydroxy acids (HAs) have been used in clinical practice for decades to treat a variety of skin conditions. The most prominent representatives in the Alpha Hydroxy Acid (AHA) class of compounds are glycolic acid, lactic acid, and salicylic acid (SA). The simplest representative of AHA is glycolic acid, which was the first of this class of compounds to be introduced into skin care products.<sup>1</sup> Lactic acid, with optimal biologic activity in its l-form, is also used in various topical formulations to exfoliate the skin and also to provide anti-aging properties.<sup>2</sup> AHAs have been shown to promote smoother, younger looking skin by increasing the rate of cell renewal and this is why chemists thought to include AHAs in their skin care formulations.

### Product Information:

BotanicalsPlus has capitalized on the power of fruits and plants together with the knowledge of the power of AHAs to develop an effective, yet gentle, blend of AHAs called **BP-Mlfruit**. **BP-Mlfruit** is a concentrated blend of five botanical extracts: bilberry, sugar cane, sugar maple,

orange, and lemon. These extracts contain several naturally occurring Alpha Hydroxy Acids. We produce **BP-Mlfruit** by processing several species of fruits and plants through a thorough extraction process, which reduces color and odor, while concentrating the active principals. The extracts are blended at the following percentages:

Bilberry	29%	Sugar Cane	13%
Sugar Maple	2%	Orange	5%
Lemon	5%		

Once extracted and composited, the extracts are concentrated by vacuum distillation until a specified concentration of actives is achieved. The product is then filtered to eliminate any particulate matter. Due to its natural origin, **BP-Mlfruit** can contain a wide array of residual natural substances, such as carbohydrates, cellulose, proteins, water-soluble vitamins and minerals.

The final product, **BP-Mlfruit**, contains the following typical concentrations of alpha hydroxy acids:

Lactic Acid	28-32%	Glycolic Acid	12-17%
Citric Acid	2-6%	Malic Acid	1% max
Tartaric Acid	1% max		

Each type of AHA offers different benefits to the skin. It is a natural, gentler approach of combining these mild fruit acids that are the key benefits in skin care preparations. This blend, which has a ratio of lactic, glycolic, citric, malic, and tartaric acids, works in unison to be effective yet milder than traditional synthetically derived AHAs.

<sup>1</sup> Alpha-hydroxy acids and carboxylic acids. Yu RJ, Van Scott EJ J Cosmet Dermatol. 2004 Apr; 3(2):76-87.

<sup>2</sup> Topically applied lactic acid increases spontaneous secretion of vascular endothelial growth factor by human reconstructed epidermis. Rendl M, Mayer C, Weninger W, Tschachler E Br J Dermatol. 2001 Jul; 145(1):3-9.

Lactic acid is traditionally used as a disinfectant and exfoliant while the glycolic acid has shown the most keratolytic activity on the skin. With the development of **BP-Mlfruit**, we have maximized cell renewal stimulation while minimizing the potential for irritation from an all natural source.

Typical Properties	
Appearance @ 25°C	Clear, colorless to pale yellow liquid
Odor	Characteristic
Specific Gravity @ 25°C	1.1690 - 1.3690
pH (as is @ 25°C)	4.0 – 7.0
Citric Acid	2.0 - 6.0%
Glycolic Acid	12.0 – 17.0%
Lactic Acid	28.0 - 32.0%
Malic Acid	<=1.0%
Tartaric Acid	<=1.0%
NVM (1g-1hr-105°C)	50% Min.
Microbial Content	<100 opg
Recommended Use Level	5 – 15%



#### Product Applications:

- Skin care creams and lotions
- Facial toners and toner pads
- Cleanser
- Scalp treatments
- Neutralizing shampoos and conditioners
- Exfoliating skin care creams and gels
- Foot care



#### Formulating Tips:

- The best formulations for **BP-Mlfruit** are nonionic creams and lotions
- **BP-Mlfruit** is freely soluble in water, glycerin, and propylene glycol. It is immiscible with commonly used cosmetic oils
- It is recommended to add **BP-Mlfruit** at the end of the formulation
- Some formulations containing polymers such as Carbopol require that the **BP-Mlfruit** be pre-diluted and/or neutralized
- Before formulating, it is recommended to always check compatibility with clays and other inorganic thickeners

*JEEN International is the exclusive distributor for BotanicalsPlus in the Personal Care Industry.*