

Your Inexpensive Secret For The Perfect Chocolate Concoction



Chocolate consists of cocoa, mixed with fat and finely powdered sugar that turns into solid confectionery⁴. Emulsifiers allow maintaining desirable rheological properties which are a key aspect in the manufacturing process of high-quality chocolate with a well-defined texture⁵.

Polyglycerol Polyricinoleate (PGPR)

Polyglycerol polyricinoleate (PGPR) is a remarkable emulsifier when it comes to chocolate applications. PGPR is aiding for smooth flow of chocolate coatings during the enrobing process². Incorporation of emulsifier is a practical alternative to reduce the amount of cocoa butter used – the most expensive bulk ingredient in chocolate production⁷ therefore some chocolate manufactures use PGPR in formulating low-fat products. Likewise, adequate flow properties can be achieved by the addition of PGPR, which improves the flow characteristics of molten chocolate².

PGPR have a complementary rheological property with lecithin, hence they are often used in combination for optimal control of chocolate rheology¹. This allows a more even coating on confectionery pieces while reducing the expensive cocoa butter in the recipe. Lowering yield value also improves the release of entrapped air in chocolate, leading to a smoother and more efficient moulding and depositing. This could help in saving costs without compromising the quality and taste of the chocolate products².

What does Chocolate Blooming Mean?

Chocolate bloom is the white-like coating that appears on the surface of chocolate products. It is divided into fat bloom, caused by changes in the fat crystals in the chocolate and sugar bloom, which are the formation of sugar crystals when comes in contact with moisture. Both fat and sugar bloom damage the appearance of chocolate and limit its shelf life^{3,4}. However, most chocolate manufacturers face issues related to fat bloom. Chocolate that has been properly manufactured could suffer fat bloom if they are stored inappropriately after shipping⁴. The ability to limit fat bloom is an additional property of PGPR².

Conclusion

Besides acting as an emulsifier, PGPR works as a viscosity modifier that assures optimal chocolate moulding and controlled enrobing in order to obtain the desired thickness for the chocolate coating. On top of that, PGPR has the advantage of limiting fat bloom which causes a less attractive feel on the palate and often gives the perception of unsafe consumption to consumers⁶. At DPO, we are honoured to be in partnership with **Palsgaard** to bring you a wide range of ingredients that will elevate the quality of your confectionery products.

References

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