# BLOMMER CHOCOLATE COMPANY
## CONVERTING FROM HIGH FAT COCOA TO 10/12

We have successfully converted higher fat cocoas to standard cocoas in ice cream and bakery formulations. This switch can be a source of cost savings that does not result in a significantly different flavor profile or texture. The following calculations are a guide for modifying a formula in order to make the change from high-fat to standard cocoas. These calculations are to be used on a formula in percentages adding up to 100%. This is a guide to be used as a starting point. Adjustments may be necessary based on your application.

Step 1: Because there is less fat present, there is a higher concentration of cocoa solids in standard cocoa. Therefore, to convert from high fat to standard fat cocoas, one must decrease the amount of cocoa accordingly.

For 15/17 to 10/12: Current % * 0.944 = new cocoa

For 22/24 to 10/12: Current % * 0.865 = new cocoa %

This is the new percentage of cocoa to be used in the formula. It will always be less cocoa than was present before.

Step 2: Depending on the recipe, one may also want to increase the fat present in the formula. This is suggested for baked goods in particular, but may not be necessary depending on the amount of cocoa present and the other ingredients in the formula. This calculation is the same for 15/17 and 22/24 cocoas.

Current % cocoa – New % Cocoa = Additional Fat %
Ex: 7.00-6.61 = 0.39

This number must be added to the fat present in the formula (shortening, oil, etc.). If the fat present in the formula is butter, proceed to step 3. If not, you can stop here. Your formula should still add up to 100%, and contain more fat and less cocoa than your previous formula containing high-fat cocoa.

Step 3: If the fat in the formula is butter, and your formula is quite sensitive to changes in fat and moisture, or the amount of cocoa in the formula is quite large, additional calculations may need to be completed. Since butter is approximately 80% fat and 15% water, one must increase the total amount of butter being added and decrease the water accordingly.

Additional Fat %/ 0.8 = Additional Butter %
Ex: 0.39/0.8 = 0.49

This number must be added to the butter present in the formula (instead of the value calculated in step 2, above).

Additional Butter % * 0.15 = water decrease

This number must be subtracted from the water percentage in the formula (given that there is water present in the formula).

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