



EXPIRATION AND MANUFACTURING DATES:

WHAT THEY INDICATE AND WHY AND WHEN THEY ARE USED ON NUTRITIONAL SUPPLEMENT BOTTLES

Expiration dates: What they indicate

Expiration dates indicate the date at which it is guaranteed the main ingredients in the capsule/tablet/powder in an unopened bottle will meet label claim. What this means, for example, if the label states 500 mg of vitamin C per serving, it is guaranteed that the serving in an unopened bottle will contain 500 mg of vitamin C up to the expiration date. After the expiration date there is a good chance the product in an unopened bottle will meet label claim. However, there is no guarantee. It should be kept in mind, though, that main ingredients generally degrade slowly. Therefore, it is very likely that, after the expiration date, the product in an unopened bottle will meet or come close to meeting label claim.

Expiration dates: What they *do not* indicate

Expiration dates, as indicated above, only indicate whether the product will, in an unopened bottle, meet label claim. Given that supplements are not fresh foods, there is little to no risk of spoilage in an unopened bottle at any time. Thus, there is little to no risk that supplements taken from a just opened bottle at any time will pose a risk to health due to spoilage. Therefore, expiration dates do not, in any way, provide an indication of risk to health of the product.

Expiration dates: Why they are being replaced by manufacturing dates on more and more nutritional supplement bottles

The reality of many supplements is that they often contain many ingredients that have different active lifetimes and ingredients such as herbs for which the active lifetimes have not been precisely determined. Therefore, for many years, expiration dates were determined by reasonable predictions based on experience and anecdotal evidence rather than on precise laboratory analysis. In the past, experience and anecdotal evidence suggested that ingredients in an unopened bottle would meet label claim up to two years after the date of manufacture. Thus, for many years, the industry convention was to label each bottle with a date two years after the date of manufacture even though there often was no hard data to support the claim that the product would meet label claim in an unopened bottle up to two years.

Because of the above, several years ago the FDA created a regulation that made it mandatory that expiration dates be backed with precise analytical testing indicating the active ingredients in an

unopened bottle would meet label claim up to that date. If this analytical data could not be provided, the bottle must be labeled with a manufacturing date. Because, as indicated above, the difficulty and, often, considerable expense (which would be passed on to the purchaser) of determining precisely, through laboratory analysis, the dates at which ingredients in an unopened bottle will still meet label claim, more and more supplement companies are putting manufacturing dates on the bottles they sell.

Do many supplement companies still put expiration dates on bottles based on anecdotal evidence and not precise laboratory analysis, in violation of FDA regulations? Anecdotal reports suggest that this is, indeed, the case due to sometimes lax FDA enforcement. Given that Moss Nutrition makes every effort to follow all FDA regulations, the decision has been made to move to manufacturing dates rather than passing the often considerable cost of testing each batch for precise expiration dates on unopened bottles, which in no way indicate any potential risk to health of the product, to the customers of Moss Nutrition.

What about opened bottles?

A statement about opened bottles is simple. We can make no guarantees about meeting label claim since it will vary depending on storage conditions. The best we can say is that it will *probably* meet label claim when immediately used in accordance with label recommendations until the last capsule/tablet is consumed when stored in a typical room temperature (68 degrees or thereabouts), low humidity environment.

Should you have further questions regarding this topic, or questions about a specific lot number or bottle, please feel free to contact me at jeffmoss@mossnutrition.com or 800-851-5444, choose extension 508. For international customers, call 00-1-413-587-993, choose extension 508.

Sincerely,

A handwritten signature in black ink that reads "Jeffrey Moss". The signature is written in a cursive, flowing style.

Jeffrey Moss, DDS, CNS, DACBN
President, CEO

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