



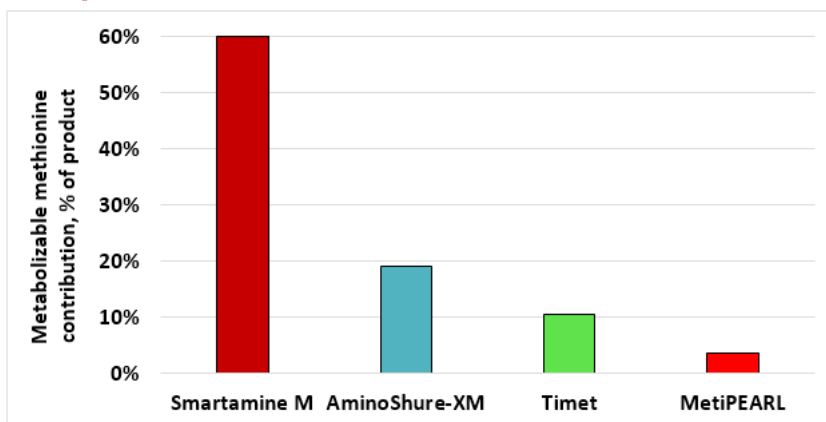
2021

Smartamine[®] M is still the most effective methionine source for your cows

Increased adoption of amino acid balancing by the dairy industry has motivated suppliers to develop new technologies to provide cost-effective concentrated sources of metabolizable methionine for use in formulation. Competition is good for any industry. Competition increases innovation among suppliers and, even better, reduces costs for customers. For Adisseo, the industry leader, it is our duty to not only advance the science of amino acid nutrition but to be prepared to continually test our products against the new wave of technologies. We'll do this using independent research centers and unbiased methodologies to accurately and precisely measure the metabolizable methionine content of any technology.

Recently, the University of New Hampshire evaluated the metabolizable contribution of three competitive products relative to **Smartamine[®] M**; **AminoShure[®]-XM**, **Timet[®]**, and **MetiPEARL[™]**. Evaluations were based on the gold standard plasma free-amino-acid dose-response approach (Whitthouse et al., 2017). Products were fed to lactating dairy cows until steady-state conditions were reached so claims on unique precision-release, slow-release, or metered-release encapsulation technology did not affect final outcomes and results.

Comparison of Metabolizable Methionine Contributions



According to each manufacturer, Smartamine M contains 75% methionine, AminoShure-XM is 68% methionine, Timet is 55% methionine, and MetiPEARL is 48% methionine. Using methionine infusions as a reference, bioavailability of methionine in Smartamine M has consistently been measured at 80% (Rulquin and Kowalczyk, 2003; Chirgwin et al., 2015). In the current comparison, bioavailability of methionine in AminoShure-XM was 28%, Timet was 19%, and MetiPEARL was 8%. Metabolizable methionine contribution is determined by multiplying a product's methionine concentration by its methionine bioavailability. The figure above illustrates the metabolizable methionine contribution of each of the four products. The metabolizable methionine contribution of Smartamine M is 60%. The metabolizable methionine contribution is 19% for AminoShure-XM, 11% for Timet, and 4% for MetiPEARL.

To provide the same amount of metabolizable methionine, AminoShure-XM would need to be fed at **3 times**, Timet at **5 times**, and MetiPEARL at **12 times** the amount of Smartamine M.

Smartamine M remains the SMART choice as the methionine source for your dairy cows.

Have questions?

Contact your local Adisseo representative to learn more about the **SmartLine™** of amino acid products.

