

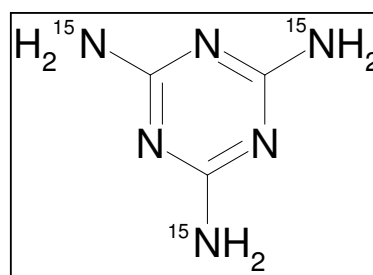
## BMF 48: Melamine- $^{15}\text{N}_3$

Melamine is a trimer of cyanamide with a 1,3,5-triazine skeleton. It contains 66% nitrogen by mass and, if mixed with resins, has fire retardant properties due to release of nitrogen. It is most commonly encountered as melamine resin in combination with formaldehyde, which is a very durable thermosetting plastic used among other things for dinnerware, countertops and cooking spoons.

**Melamine recently caught the world's attention for another reason - babies in China and pets in the USA became ill after having consumed foodstuffs containing this chemical.**

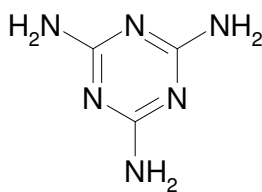


Melamine had been added to low quality pet food and infant formula to make the protein content appear higher than it actually is. Simple protein tests use nitrogen content as a measure for proteins, and addition of protein-rich compounds like melamine therefore alters the results.

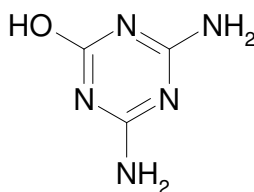


Melamine is relatively non-toxic to humans, but in combination with cyanuric acid it is absorbed into the bloodstream, where they concentrate and interact in the urine-filled renal microtubules. Melamine-cyanurate then crystallize and form large numbers of round, yellow crystals, which block and damage the renal cells that line the tubes, causing the kidneys to malfunction.

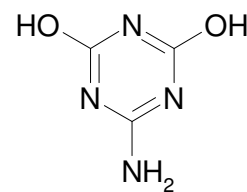
**Chiron AS now offers both native and  $^{15}\text{N}$ -labelled melamine for analytical work, as well as the related products ammeline and ammeline!**



Melamine



Ammeline



Ammelide

Chiron No.	Product
2528.3	1,3,5-Triazine-2,4,6-triamine (Melamine)
9797.3	1,3,5-Triazine-2,4,6-triamine- $^{15}\text{N}_3$ (Melamine- $^{15}\text{N}_3$ )
8735.3	Ammelide
8736.3	Ammeline

Available as 100µg/mL solution in methanol (1mL), 2528.3 also available as neat material.

