



Bovine Vitamin A and E – Normal Ranges

| | | | |
|-----------|------------------------|-------|----------------|
| Vitamin A | Adult | Liver | 100-200 ppm ww |
| | | Serum | 0.3-0.7 ppm |
| | Newborn (1-9 days old) | Liver | 14-36 ppm ww |
| | | Serum | 0.18-0.23 ppm |
| Vitamin E | Adult | Liver | 4.0-9.0 ppm ww |
| | | Serum | 3.0-10.0 ppm |
| | Newborn (1-9 days old) | Liver | 3.0-6.0 ppm ww |
| | | Serum | 0.8-1.2 ppm |

Important considerations:

- Age of animal is required to properly assess vitamin status.
- Vitamin status of aborted/stillborn calves is not diagnostically useful. Vitamin A and E are poorly transported across the placenta, so the calf is completely reliant on good quality colostrum as its source of vitamins. The amount of vitamin A and E that dam have stored in her liver in late gestation will influence the amount of vitamin A and E that will be in the colostrum. Vitamin A is only stored in the liver for 2-4 months when sources are adequate. Vitamin E is only stored for a few weeks when sources are adequate. Therefore, ensuring supplementation and high-quality feed for cows throughout gestation is important to prevent deficiencies in calves. *If vitamin status is a concern in the herd, please submit serum from the dam(s).*
- Vitamins are light sensitive; samples must be protected from light to prevent falsely low numbers.