***Attachment 3***

***Laboratory Assessments Update***

***2018***

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Chemical / Metabolite Name** | **Matrix** | **Lab** | **Vessel (s)** | **03-04** | **05-06** | **07-08** | **09-10** | **11-12** | **13-14** | **15-16** | **17-18** | **Branch** | **Lab Contact** |
| **Fat-Soluble Vitamins and Micronutrients** | | | | | | | | | | | | | |
| Vitamin A | serum | 54 | 15 |  | ● | **d** |  |  |  |  | ● | NBB | Schleicher |
| Vitamin E | serum | 54 | 15 |  | ● | **d** |  |  |  |  | ● | NBB | Schleicher |
| Retinyl palmitate | serum | 54 | 15 |  | ● | **d** |  |  |  |  | ● | NBB | Schleicher |
| Retinyl stearate | serum | 54 | 15 |  | ● | **d** |  |  |  |  | ● | NBB | Schleicher |
| *gamma-*Tocopherol | serum | 54 | 15 |  | ● | **d** |  |  |  |  | ● | NBB | Schleicher |
| *delta-*Tocopherol | serm | 54 | 15 |  |  |  |  |  |  |  | ● | NBB | Schleicher |
| *alpha*-carotene | serum | 54 | 15 |  | ● | **d** |  |  |  |  | ● | NBB | Schleicher |
| *trans-beta-*Carotene | serum | 54 | 15 |  | ● | **d** |  |  |  |  | ● | NBB | Schleicher |
| *cis-beta-*Carotene | serum | 54 | 15 |  | ● | **d** |  |  |  |  | ● | NBB | Schleicher |
| *alpha-*Cryptoxanthin | serum | 54 | 15 |  |  |  |  |  |  |  | ● | NBB | Schleicher |
| *beta-*Cryptoxanthin | serum | 54 | 15 |  | ● | **d** |  |  |  |  | ● | NBB | Schleicher |
| Lutein/zeaxanthin combined or measured and reported as separate analytes | serum | 54 | 15 |  | ● | **d** |  |  |  |  | ● | NBB | Schleicher |
| *trans-*Lycopene | serum | 54 | 15 |  | ● | **d** |  |  |  |  | ● | NBB | Schleicher |
| Total lycopene | serum | 54 | 15 |  | ● | **d** |  |  |  |  | ● | NBB | Schleicher |
| 25-OH Vitamin D (D2 + D3) | serum | 54 | 70 | ● | ● | ● | ● | ● | ● | ● | ● | NBB | Schleicher |
| 25-OH Vitamin D2 | serum | 54 | 70 |  |  | ● | ● | ● | ● | ● | ● | NBB | Schleicher |
| 25-OH Vitamin D3 | serum | 54 | 70 |  |  | ● | ● | ● | ● | ● | ● | NBB | Schleicher |
| epimer-25-OH Vitamin D3 | serum | 54 | 70 |  |  | ● | ● | ● | ● | ● | ● | NBB | Schleicher |