**ARUP LABORATORIES | aruplab.com**
500 Chipeta Way, Salt Lake City, Utah 84108-1221
phone: 801-583-2787, toll free: 800-522-2787
Jonathan R. Genzen, MD, PhD, Chief Medical Officer

**PATIENT REPORT**

Patient Age/Sex: 52 years Male

**Specimen Collected: 14-Mar-23 12:22**

**Phosphatidylethanol (PEth), Whole Blood** | **Received: 14-Mar-23 12:22** **Report/Verified: 14-Mar-23 12:24**

| Procedure | Result | Units | Reference Interval |
|---|---|---|---|
| EER Peth | EERUnavailable | | |
| PEth 16:0/18:1 (POPEth) | 15 [i1] | ng/mL | |
| PEth 16:0/18:2 (PLPEth) | 15 | ng/mL | |

## Test Information

i1: PEth 16:0/18:1 (POPEth)

INTERPRETIVE INFORMATION:Phosphatidylethanol (PEth), Whole Blood
Phosphatidylethanol (PEth) homologues Result Interpretation

PEth 16:0/18:1 (POPEth)
Less than 10 ng/mL.....Not detected
Less than 20 ng/mL.....Abstinence or light alcohol consumption
20 - 200 ng/mL.....Moderate alcohol consumption
Greater than 200 ng/mL.....Heavy alcohol consumption or chronic alcohol use

PEth 16:0/18:2 (PLPEth).....Reference ranges are not well established.
(Reference: W. Ulwelling and K Smith 2018 J. Forensic Sci)

Phosphatidylethanol (PEth) is a group of phospholipids formed in the presence of ethanol, phospholipase D and phosphatidylcholine. PEth is known to be a direct alcohol biomarker. The predominant PEth homologues are PEth 16:0/18:1 (POPEth) and PEth 16:0/18:2 (PLPEth), which account for 37-46% and 26-28% of the total PEth homologues, respectively. PEth is incorporated into the phospholipid membrane of red blood cells and has a general half-life of 4-10 days and a window of detection of 2-4 weeks. However, the window of detection is longer in individuals who chronically or excessively consume alcohol. The limit of quantification is 10 ng/mL. Serial monitoring of PEth may be helpful in monitoring alcohol abstinence over time. PEth results should be interpreted in the context of the patient's clinical and behavioral history. Patients with advanced liver disease may have falsely elevated PEth concentrations (Nguyen VL et al 2018, Alcoholism Clinical & Experimental Research).

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the U.S. Food and Drug Administration. This test was performed in a CLIA-certified laboratory and is intended for clinical purposes.