

REGIONAL PATHOLOGY SERVICES  
 THE NEBRASKA MEDICAL CENTER  
 981180 Nebraska Medical Center, Omaha, Nebraska 68198-1180  
 Ph: (402)559-6420 1-800-334-0459 Fax: (402)559-9497

PATIENT:  
 D.O.B.: 01/01/1978 SEX: M

CLIENT:  
 RPS MRN: ABCH60716  
 SPECIMEN#:  
 REF PHYS:  
 CLIENT PHYS:

CHART ID:

Results Legend: \*\* = Critical Result, \* = Result Outside of Normal Range

T4798 COLL: 04/18/2023 07:13 REC: 04/18/2023 12:20 LOC/PHYS: OUTSIDE,PHYSICIAN

PHOSPHATIDYLETHANOL

PEth 16:0/18:1 15  
 Unit: ng/mL

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.

CONTINUED

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PATIENT: CLIENT: Boone County Health Center  
D.O.B.: 01/01/1978 SEX: M RPS MRN: ABCH60716  
CHART ID: SPECIMEN#:  
REF PHYS:  
CLIENT PHYS:

Results Legend: \*\* = Critical Result, \* = Result Outside of Normal Range

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T4798 COLL: 04/18/2023 07:13 REC: 04/18/2023 12:20 LOC/PHYS: OUTSIDE,PHYSICIAN

PHOSPHATIDYLETHANOL (CONTINUED)  
Peth 16:0/18.2 16  
Unit: ng/mL  
EER Peth EERUnavailable

Performed By: ARUP Laboratories  
500 Chipeta Way  
Salt Lake City, UT 84108  
Laboratory Director: Jonathan R. Genzen, MD, PhD