



A Waters Company

Donny Juarez
Energy Laboratories
2393 Salt Creek Hwy
Casper, WY 82601
USA

RAD-124  ***Final Report***

The RadChem logo is a circular emblem with a radiation symbol (three blades around a central dot) in the center, all enclosed within a double-lined circle. A small "TM" trademark symbol is located at the bottom right of the emblem.

RadChem™ Proficiency Testing

RadChem™ Study

Reference Date: 01/11/21

Open Date: 01/11/21

Close Date: 02/25/21

Report Issued Date: 03/01/21



A Waters Company

March 1, 2021

Donny Juarez
Energy Laboratories
2393 Salt Creek Hwy
Casper, WY 82601

Enclosed is your final report for ERA's RadCheM™ Proficiency Testing (PT) study, RAD-124. Your final report includes an evaluation of all results submitted by your laboratory to ERA.

Data Evaluation Protocols: All of the analytes in ERA's RAD-124 study have been evaluated by comparing the reported result to the acceptance limits generated using the criteria contained in the NELAC Fields of Proficiency Testing (FoPT) table and the evaluation criteria contained in the 2016 TNI Standard, Volume 3.

Corrective Action Help: As part of your accreditation(s), you may be required to identify the root cause of any "Not Acceptable" results, implement the necessary corrective actions, and then satisfy your PT requirements by participating in a Supplemental (QuiK™ Response) or future ERA PT study. If you need help, ERA's technical staff is available to help your laboratory resolve any technical issues that may be impairing your PT performance and possibly affecting your routine data quality. Our laboratory and technical staff have many years of collective experience in performing the full range of environmental analyses. As part of our technical support, ERA offers QC samples that can be useful in helping you work through your technical issues.

Thank you for your participation in ERA's RadCheM™ Proficiency Testing study, RAD-124. If you have any questions, please contact our Proficiency Testing Department at 1-800-372-0122.

Sincerely,

A handwritten signature in black ink, appearing to read "Matthew Seebeck", written in a cursive style.

Matthew Seebeck
Quality Officer

attachments



A Waters Company

Report Recipient	Contact/Phone Number	Reporting Type
Alabama	Benny Laughlin / 334-271-7775	All Analytes
California ELAP	Christine Sotelo / 916-341-5175	All Analytes
Colorado	Ben Chouaf / 303-692-3045	All Analytes
EPA Region 8	Marcie Tidd / (303) 462-9476	All Analytes
Florida	Vanessa Soto / 904-791-1599	All Analytes
Idaho	Ernie Bader / 208-334-2235 x 290	All Analytes
Montana	Russell Leu / 406-444-5259	All Analytes
Nebraska	Laurie Wieting / 402-471-8407	All Analytes
Nevada	Paige Menicucci / 775-687-9311	All Analytes
New Mexico (WS)	Bethany Anderson / 505-222-9552	All Analytes
Oregon	Travis Bartholomew / 503-693-4122	All Analytes
South Dakota	Stacy Ellwanger / 605-773-4757	All Analytes
Texas	Frank Jamison / (512) 239-3754	All Analytes
Utah	Cathy Mitchell / (801) 965-2588	All Analytes
Washington	Rebecca Wood / 360-871-8811	All Analytes

RAD-124 Definitions & Study Discussion

Study Dates: 01/11/21 - 02/25/21

Report Issued: 03/01/21

RAD Study Definitions

The Reported Value is the value that the laboratory reported to ERA.

The ERA Assigned Values are compliant with the most current NELAC Fields of Proficiency Testing (FoPT) table. The assigned values are directly traceable to the commercially prepared starting materials used to manufacture the PT standards.

The Acceptance Limits are established per the criteria contained in the most current NELAC FoPT table or ERA's SOP for the Generation of Performance Acceptance Limits™ as applicable.

The Performance Evaluation:

Acceptable = Reported Value falls within the Acceptance Limits.

Not Acceptable = Reported Value falls outside the Acceptance Limits.

No Evaluation = Reported Value cannot be evaluated.

Not Reported = No Value reported.

The Method Description is the method the laboratory reported to ERA.

RAD Study Discussion

ERA's RAD-124 RadCheM™ Proficiency Testing (PT) study has been reviewed by ERA senior management and certified compliant with the requirements of the 2016 TNI Standard and the criteria contained in the most current NELAC Fields of Proficiency Testing (FoPT) table.

ERA's RAD-124 RadCheM™ PT study standards were examined for any anomalies. A full review of all homogeneity, stability and accuracy verification data was completed. All analytical verification data for all analytes met the acceptance criteria contained in the 2016 TNI Standard and the criteria contained in the most current NELAC FoPT tables.

All analytes are included in ERA's A2LA accreditation, certification number 1539.01.

The data submitted by participating laboratories was also examined for study anomalies. There were no anomalies observed during the statistical review of the data.

ERA's RAD-124 RadCheM™ study reports shall not be reproduced except in their entirety and not without the permission of the participating laboratories. The report must not be used by the participating laboratories to claim product endorsement by any agency of the U. S. government.

The data contained herein are confidential and intended for your use only.

If you have any questions or concerns regarding your assessment in ERA's RadCheM™ Proficiency Testing program, please contact our Proficiency Testing Department at 1-800-372-0122.



RAD-124 Laboratory Exception Report



A Waters Company

Donny Juarez
Quality Assurance Manager
Energy Laboratories
2393 Salt Creek Hwy
Casper, WY 82601
307-235-0515 x3244

EPA ID:
ERA Customer Number:
Report Issued:
Study Dates:

WY00002
E772828
03/01/21
01/11/21 - 02/25/21

Not Acceptable Evaluations

There were no Not Acceptable evaluations for this study.





Final Report Results For Laboratory Energy Laboratories



Final Evaluation Report

Study: **RAD-124**

ERA Customer Number: **E772828**

Laboratory Name: **Energy Laboratories**

RAD Results



RAD-124 Final Evaluation Report

A Waters Company

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Quality Assurance Manager
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Study Dates:

WY00002
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03/01/21
01/11/21 - 02/25/21

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
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RAD GroSS™ Alpha/Beta (cat# 809, lot# R124-759)

2830	Gross Alpha	pCi/L	52	63.3	33.2 - 78.5	Acceptable	EPA 900.0 GPC 1980	2/2/2021	-0.215	54.8	13.2	trs
2840	Gross Beta	pCi/L	40.3	39.8	26.4 - 47.3	Acceptable	EPA 900.0 GPC 1980	2/2/2021	0.887	36.0	4.88	trs

RAD NaturalS™ (cat# 811, lot# R124-751)

2965	Radium-226	pCi/L		15.5	11.5 - 17.8	Not Reported				16.0	1.45	
2970	Radium-228	pCi/L	13.2	12.9	8.54 - 15.8	Acceptable	EPA Ra-05	1/25/2021	0.262	12.7	1.83	amm
3055	Uranium (Nat)	pCi/L		30.1	24.4 - 33.4	Not Reported				27.9	1.87	
3055	Uranium (Nat) mass	µg/L		43.9	35.5 - 48.7	Not Reported				42.5	3.18	

RAD NaturalS™ (cat# 811, lot# R124-751)

2965	Radium-226	pCi/L	15.9	15.5	11.5 - 17.8	Acceptable	EPA 903.0 GPC 1980	2/12/2021	-0.0728	16.0	1.45	plj
2970	Radium-228	pCi/L		12.9	8.54 - 15.8	Not Reported				12.7	1.83	
3055	Uranium (Nat)	pCi/L		30.1	24.4 - 33.4	Not Reported				27.9	1.87	
3055	Uranium (Nat) mass	µg/L		43.9	35.5 - 48.7	Not Reported				42.5	3.18	

RAD NaturalS™ (cat# 811, lot# R124-751)

2965	Radium-226	pCi/L		15.5	11.5 - 17.8	Not Reported				16.0	1.45	
2970	Radium-228	pCi/L		12.9	8.54 - 15.8	Not Reported				12.7	1.83	
3055	Uranium (Nat)	pCi/L	27.8	30.1	24.4 - 33.4	Acceptable	SM 7500-U C-2000 2000	2/5/2021	-0.0621	27.9	1.87	
3055	Uranium (Nat) mass	µg/L	38.7	43.9	35.5 - 48.7	Acceptable	SM 7500-U C-2000 2000	2/5/2021	-1.20	42.5	3.18	





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RAD-124 Final Evaluation Report

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RAD NaturalS™ (cat# 811, lot# R124-751)

2965	Radium-226	pCi/L		15.5	11.5 - 17.8	Not Reported				16.0	1.45	
2970	Radium-228	pCi/L		12.9	8.54 - 15.8	Not Reported				12.7	1.83	
3055	Uranium (Nat)	pCi/L	26.6	30.1	24.4 - 33.4	Acceptable	EPA 200.8 5.4 1994	2/1/2021	-0.704	27.9	1.87	
3055	Uranium (Nat) mass	µg/L	39.8	43.9	35.5 - 48.7	Acceptable	EPA 200.8 5.4 1994	2/1/2021	-0.856	42.5	3.18	



CERTIFICATE OF EXCELLENCE

In recognition of the quality of your laboratory in proficiency testing for

RAD-124

Energy Laboratories

is issued this certificate of achievement by ERA. This laboratory has been recognized as a Laboratory of Excellence for achieving 100% acceptable data in this study which included 47 participating laboratories. This achievement is a demonstration of the superior quality of the laboratory in evaluation of the standards listed below.

GroSS™ Alpha/Beta

NaturalS™



Matthew Seebeck
Quality Officer