

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

RAD-132  ***Final Report***

RadChem™ Proficiency Testing

RadChem™ Study

Reference Date: 01/09/2023

Open Date: 01/09/2023

Close Date: 02/23/2023

Report Issued Date: 02/27/2023



A Waters Company

February 27, 2023

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-132. 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-132 study have been evaluated by comparing the reported result to the acceptance limits generated using the criteria contained in the most current TNI 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-132. 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 "C Huff", with a horizontal line extending to the right.

Craig Huff
Senior Technical Manager

attachments





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Report Recipient	Contact/Phone Number	Reporting Type
California ELAP	Christine Sotelo / 916-341-5175	All Analytes
Colorado	Thomas Lill / 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	Tara Wulfekoetter / 402-471-8439	All Analytes
Nevada	Paige Menicucci / 775-687-9311	All Analytes
North Dakota	Cynthia Auen / 701-328-6172	All Analytes
Oregon	Travis Bartholomew / 503-693-4122	All Analytes
South Dakota	Rea Riggle / 605-773-3368	All Analytes
Texas	Frank Jamison / (512) 239-3754	All Analytes
Washington	Rebecca Wood / 360-871-8811	All Analytes

RAD-132 Definitions & Study Discussion

Study Dates: 01/09/2023 - 02/23/2023

Report Issued: 02/27/2023

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 TNI 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 TNI 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-132 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 TNI Fields of Proficiency Testing (FoPT) table.

ERA's RAD-132 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 TNI FoPT tables.

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-132 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.





A Waters Company

RAD-132 Laboratory Exception Report

Donny Juarez
Quality Assurance Manager
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2393 Salt Creek Hwy
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307-235-0515 x3244

EPA ID: WY00002
ERA Customer Number: E772828
Report Issued: 02/27/2023
Study Dates: 01/09/2023 - 02/23/2023

Not Acceptable Evaluations

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description
RAD GroSS™ Alpha/Beta (cat# 809, lot# R132-759)							
2830	Gross Alpha	pCi/L	42.1	30.0	15.3 - 39.2	Not Acceptable	EPA 900.0 (GPC) 1980
RAD NaturalS™ (cat# 811, lot# R132-751)							
3055	Uranium (Nat)	pCi/L	8.79	7.36	5.64 - 8.60	Not Acceptable	SM7500U C 21st ED 2000
1184	Uranium (mass)	µg/L	13.6	10.7	8.18 - 12.5	Not Acceptable	SM7500U C 21st ED 2000



All analytes are included in ERA's A2LA accreditation. Lab Code: 1539-01





Final Report Results For Laboratory Energy Laboratories



All analytes are included in ERA's A2LA accreditation. Lab Code: 1539-01

16341 Table Mountain Pkwy • Golden, CO 80403 • 800.372.0122 • 303.431.8454 • fax 303.421.0159 • www.eraqc.com

Study # : RAD-132 



Final Evaluation Report

Study: **RAD-132**

ERA Customer Number: **E772828**

Laboratory Name: **Energy Laboratories**

RAD Results



All analytes are included in ERA's A2LA accreditation. Lab Code: 1539-01

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Study # : RAD-132





RAD-132 Final Evaluation Report

A Waters Company

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

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

WY00002
E772828
02/27/2023
01/09/2023 - 02/23/2023

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# R132-759)

2830	Gross Alpha	pCi/L		30.0	15.3 - 39.2	Not Reported				26.1	3.72	
2840	Gross Beta	pCi/L	19.8	16.5	9.25 - 24.8	Acceptable	EPA 900.0 (GPC) 1980	2/2/2023	2.65	14.1	2.16	haw

RAD GroSS™ Alpha/Beta (cat# 809, lot# R132-759)

2830	Gross Alpha	pCi/L	42.1	30.0	15.3 - 39.2	Not Acceptable	EPA 900.0 (GPC) 1980	2/15/2023	4.30	26.1	3.72	trs
2840	Gross Beta	pCi/L		16.5	9.25 - 24.8	Not Reported				14.1	2.16	

RAD NaturalS™ (cat# 811, lot# R132-751)

2965	Radium-226	pCi/L	8.76	8.26	6.21 - 9.71	Acceptable	EPA 903.0 (GPC) 1980	2/10/2023	0.141	8.63	0.937	kdk
2970	Radium-228	pCi/L		7.17	4.51 - 9.20	Not Reported				6.58	1.27	
3055	Uranium (Nat)	pCi/L		7.36	5.64 - 8.60	Not Reported				7.32	0.760	
1184	Uranium (mass)	µg/L		10.7	8.18 - 12.5	Not Reported				10.6	0.708	

RAD NaturalS™ (cat# 811, lot# R132-751)

2965	Radium-226	pCi/L		8.26	6.21 - 9.71	Not Reported				8.63	0.937	
2970	Radium-228	pCi/L		7.17	4.51 - 9.20	Not Reported				6.58	1.27	
3055	Uranium (Nat)	pCi/L	8.79	7.36	5.64 - 8.60	Not Acceptable	SM7500U C 21st ED 2000	2/14/2023	1.93	7.32	0.760	meh
1184	Uranium (mass)	µg/L	13.6	10.7	8.18 - 12.5	Not Acceptable	SM7500U C 21st ED 2000	2/14/2023	4.28	10.6	0.708	meh

RAD NaturalS™ (cat# 811, lot# R132-751)

2965	Radium-226	pCi/L		8.26	6.21 - 9.71	Not Reported				8.63	0.937	
2970	Radium-228	pCi/L	7.34	7.17	4.51 - 9.20	Acceptable	EPA Ra-05	2/2/2023	0.601	6.58	1.27	trs
3055	Uranium (Nat)	pCi/L		7.36	5.64 - 8.60	Not Reported				7.32	0.760	
1184	Uranium (mass)	µg/L		10.7	8.18 - 12.5	Not Reported				10.6	0.708	



All analytes are included in ERA's A2LA accreditation. Lab Code: 1539-01