

DATA PACKAGE

METALS

PROJECT NAME : WASTE WATER

ZIMMER BIOMET

10 Pomeroy Rd

Parsippany-Troy Hills, NJ - 07054

Phone No: 862-308-3495

ORDER ID : Q1967

ATTENTION : Charles Tengwall



Laboratory Certification ID # 20012



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Cover Page

Order ID : Q1967

Project ID : Waste Water

Client : Zimmer Biomet

Lab Sample Number

Q1967-01
Q1967-02
Q1967-03
Q1967-04
Q1967-05

Client Sample Number

RECLAIM-TANK
BOOSTER-1
ACID-PIT
CHAMBER-WASHER
PORT-SAMPLE

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature :

APPROVED

By Nimisha Pandya, QA/QC Supervisor at 9:36 am, May 20, 2025

Date: 5/20/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012



284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

CASE NARRATIVE

Zimmer Biomet

Project Name: Waste Water

Project # N/A

Order ID # Q1967

Test Name: Metals Group3

A. Number of Samples and Date of Receipt:

5 Water samples were received on 05/06/2025.

B. Parameters:

According to the Chain of Custody document, the following analyses were requested: Metals Group3. This data package contains results for Metals Group3.

C. Analytical Techniques:

The analysis and digestion of Metals Group3 was based on method 200.7.

D. QA/ QC Samples:

The Holding Times were met for all analysis.

Sample RECLAIM-TANK , ACID-PIT, PORT-SAMPLE were diluted due to highly contaminated matrix to avoid the damage to detector.

The Blank Spike met requirements for all samples.

The Duplicate analysis met criteria for all samples.

The Matrix Spike analysis met criteria for all samples.

The Matrix Spike Duplicate analysis met criteria for all samples.

The Blank analysis did not indicate the presence of lab contamination.

The Calibration met the requirements.

The Serial Dilution met the acceptable requirements.

E. Additional Comments:

LLCCV & LLICV are not required for 200.7 method. The % recovery was outside of acceptance limit for Zinc of CCV04 in analytical sequence LB135744. Between CCV03 and CCV04 none of the samples were analyzed, therefore no further corrective action was taken.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature _____

APPROVED

By Nimisha Pandya, QA/QC Supervisor at 9:37 am, May 20, 2025

DATA REPORTING QUALIFIERS- INORGANIC

For reporting results, the following “ Results Qualifiers” are used:

J	Indicates the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL).
U	Indicates the analyte was analyzed for, but not detected.
ND	Indicates the analyte was analyzed for, but not detected
E	Indicates the reported value is estimated because of the presence of interference
M	Indicates Duplicate injection precision not met.
N	Indicates the spiked sample recovery is not within control limits.
S	Indicates the reported value was determined by the Method of Standard Addition (MSA).
*	Indicates that the duplicate analysis is not within control limits.
+	Indicates the correlation coefficient for the MSA is less than 0.995.
D	Indicates the reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
M	Method qualifiers “P” for ICP instrument “PM” for ICP when Microwave Digestion is used “CV” for Manual Cold Vapor AA “AV” for automated Cold Vapor AA “CA” for MIDI-Distillation Spectrophotometric “AS” for Semi -Automated Spectrophotometric “C” for Manual Spectrophotometric “T” for Titrimetric “NR” for analyte not required to be analyzed
OR	Indicates the analyte’s concentration exceeds the calibrated range of the instrument for that specific analysis.
Q	Indicates the LCS did not meet the control limits requirements
H	Sample Analysis Out Of Hold Time

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: Q1967

Completed

For thorough review, the report must have the following:

GENERAL:

Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)

✓

Check chain-of-custody for proper relinquish/return of samples

✓

Is the chain of custody signed and complete

✓

Check internal chain-of-custody for proper relinquish/return of samples /sample extracts

✓

Collect information for each project id from server. Were all requirements followed

✓

COVER PAGE:

Do numbers of samples correspond to the number of samples in the Chain of Custody on login page

✓

Do lab numbers and client Ids on cover page agree with the Chain of Custody

✓

CHAIN OF CUSTODY:

Do requested analyses on Chain of Custody agree with form I results

✓

Do requested analyses on Chain of Custody agree with the log-in page

✓

Were the correct method log-in for analysis according to the Analytical Request and Chain of Castody

✓

Were the samples received within hold time

✓

Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle

✓

ANALYTICAL:

Was method requirement followed?

✓

Was client requirement followed?

✓

Does the case narrative summarize all QC failure?

✓

All runlogs and manual integration are reviewed for requirements

✓

All manual calculations and /or hand notations verified

✓

QA Review Signature: SOHIL JODHANI

Date: 05/20/2025

Hit Summary Sheet
SW-846

SDG No.:	Q1967	Order ID:	Q1967
Client:	Zimmer Biomet	Project ID:	Waste Water

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID : Q1967-01	RECLAIM-TANK RECLAIM-TANK	Water	Zinc	22300	D	10.0	100	ug/L
Client ID : Q1967-02	BOOSTER-1 BOOSTER-1	Water	Zinc	132		2.00	20.0	ug/L
Client ID : Q1967-03	ACID-PIT ACID-PIT	Water	Zinc	81100	D	50.0	500	ug/L
Client ID : Q1967-04	CHAMBER-WASHER CHAMBER-WASHER	Water	Zinc	31.6		2.00	20.0	ug/L
Client ID : Q1967-05	PORT-SAMPLE PORT-SAMPLE	Water	Zinc	22300	D	10.0	100	ug/L



SAMPLE DATA

Report of Analysis

Client:	Zimmer Biomet	Date Collected:	05/05/25
Project:	Waste Water	Date Received:	05/06/25
Client Sample ID:	RECLAIM-TANK	SDG No.:	Q1967
Lab Sample ID:	Q1967-01	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7440-66-6	Zinc	22300	D	5	10.0	100	ug/L	05/08/25 10:10	05/13/25 15:04	EPA 200.7	

Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	Metals Group3			

U = Not Detected
 LOQ = Limit of Quantitation
 MDL = Method Detection Limit
 LOD = Limit of Detection
 D = Dilution
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
 B = Analyte Found in Associated Method Blank
 * = indicates the duplicate analysis is not within control limits.
 E = Indicates the reported value is estimated because of the presence of interference.
 OR = Over Range
 N =Spiked sample recovery not within control limits

Report of Analysis

Client:	Zimmer Biomet	Date Collected:	05/05/25
Project:	Waste Water	Date Received:	05/06/25
Client Sample ID:	BOOSTER-1	SDG No.:	Q1967
Lab Sample ID:	Q1967-02	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7440-66-6	Zinc	132		1	2.00	20.0	ug/L	05/08/25 10:10	05/13/25 15:08	EPA 200.7	

Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	Metals Group3			

U = Not Detected
 LOQ = Limit of Quantitation
 MDL = Method Detection Limit
 LOD = Limit of Detection
 D = Dilution
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
 B = Analyte Found in Associated Method Blank
 * = indicates the duplicate analysis is not within control limits.
 E = Indicates the reported value is estimated because of the presence of interference.
 OR = Over Range
 N =Spiked sample recovery not within control limits

Report of Analysis

Client:	Zimmer Biomet	Date Collected:	05/05/25
Project:	Waste Water	Date Received:	05/06/25
Client Sample ID:	ACID-PIT	SDG No.:	Q1967
Lab Sample ID:	Q1967-03	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7440-66-6	Zinc	81100	D	25	50.0	500	ug/L	05/08/25 10:10	05/13/25 15:28	EPA 200.7	

Color Before:	Gray	Clarity Before:	Cloudy	Texture:
Color After:	Gray	Clarity After:	Cloudy	Artifacts:
Comments:	Metals Group3			

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N = Spiked sample recovery not within control limits

Report of Analysis

Client:	Zimmer Biomet	Date Collected:	05/05/25
Project:	Waste Water	Date Received:	05/06/25
Client Sample ID:	CHAMBER-WASHER	SDG No.:	Q1967
Lab Sample ID:	Q1967-04	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7440-66-6	Zinc	31.6		1	2.00	20.0	ug/L	05/08/25 10:10	05/13/25 15:23	EPA 200.7	

Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	Metals Group3			

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N = Spiked sample recovery not within control limits

Report of Analysis

Client:	Zimmer Biomet	Date Collected:	05/05/25
Project:	Waste Water	Date Received:	05/06/25
Client Sample ID:	PORT-SAMPLE	SDG No.:	Q1967
Lab Sample ID:	Q1967-05	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7440-66-6	Zinc	22300	D	5	10.0	100	ug/L	05/08/25 10:10	05/13/25 15:44	EPA 200.7	

Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	Metals Group3			

U = Not Detected
 LOQ = Limit of Quantitation
 MDL = Method Detection Limit
 LOD = Limit of Detection
 D = Dilution
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
 B = Analyte Found in Associated Method Blank
 * = indicates the duplicate analysis is not within control limits.
 E = Indicates the reported value is estimated because of the presence of interference.
 OR = Over Range
 N =Spiked sample recovery not within control limits

LAB CHRONICLE

OrderID:	Q1967	OrderDate:	5/6/2025 12:11:18 PM
Client:	Zimmer Biomet	Project:	Waste Water
Contact:	Charles Tengwall	Location:	L41

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1967-01	RECLAIM-TANK	Water	Metals Group3	200.7	05/05/25	05/08/25	05/13/25	05/06/25
Q1967-02	BOOSTER-1	Water	Metals Group3	200.7	05/05/25	05/08/25	05/13/25	05/06/25
Q1967-03	ACID-PIT	Water	Metals Group3	200.7	05/05/25	05/08/25	05/13/25	05/06/25
Q1967-04	CHAMBER-WASHER	Water	Metals Group3	200.7	05/05/25	05/08/25	05/13/25	05/06/25
Q1967-05	PORT-SAMPLE	Water	Metals Group3	200.7	05/05/25	05/08/25	05/13/25	05/06/25



SHIPPING DOCUMENTS

CLIENT INFORMATION

CLIENT PROJECT INFORMATION

CLIENT BILLING INFORMATION

REPORT TO BE SENT TO:

COMPANY: Zimmer Biomet
ADDRESS: 10 Pomeroy Rd
CITY: Parsippany STATE: NJ ZIP: 07054
ATTENTION: Charles Tengwall
PHONE: 862-308-3495 FAX:

PROJECT NAME: Zimmer Zinc Samples
PROJECT NO.: LOCATION:
PROJECT MANAGER:
e-mail: Charles.Tengwall@zimmerbiomet.com
PHONE: FAX:

BILL TO: Charles Tengwall PO#:
ADDRESS: 10 Pomeroy Rd
CITY: Parsippany STATE: NJ ZIP: 07054
ATTENTION: PHONE:

ANALYSIS

DATA TURNAROUND INFORMATION

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): 5 DAYS*
EDD: _____ DAYS*

*TO BE APPROVED BY CHEMTECH

STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS

DATA DELIVERABLE INFORMATION

☐ Level 1 (Results Only) ☒ Level 4 (QC + Full Raw Data)
☐ Level 2 (Results + QC) ☐ NJ Reduced ☐ US EPA CLP
☐ Level 3 (Results + QC) ☐ NYS ASP A ☐ NYS ASP B
+ Raw Data ☐ Other _____
☐ EDD FORMAT

1 2 3 4 5 6 7 8 9

PRESERVATIVES

COMMENTS

← Specify Preservatives
A-HCl D-NaOH
B-HNO3 E-ICE
C-H2SO4 F-OTHER

ALLIANCE SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES	PRESERVATIVES									COMMENTS
			COMP	GRAB	DATE	TIME		1	2	3	4	5	6	7	8	9	
1.	Reclaim Tank				5/5/25	10:05											
2.	Booster #1					10:06											
3.	Acid Pit					10:11											
4.	Chamber Washer					10:07											
5.	Port Sample					10:13											
6.																	
7.																	
8.																	
9.																	
10.																	

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER: 1. [Signature]	DATE/TIME: 5/5/25 10:05	RECEIVED BY: [Signature] 1402	Conditions of bottles or coolers at receipt: <input type="checkbox"/> COMPLIANT <input type="checkbox"/> NON COMPLIANT <input type="checkbox"/> COOLER TEMP _____ °C
RELINQUISHED BY SAMPLER: 2. [Signature]	DATE/TIME:	RECEIVED BY:	Comments: PH 0.7 Lot # 80A0441
RELINQUISHED BY SAMPLER: 3. [Signature]	DATE/TIME: 1438	RECEIVED BY:	Temp 2.8°C Adjustment factor 71 IR Gun #1
	5-6-25		Page ____ of CLIENT: <input type="checkbox"/> Hand Delivered <input type="checkbox"/> Other Shipment Complete <input type="checkbox"/> YES <input type="checkbox"/> NO

Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	68HERH20D0011
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255424 Rev 1
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	T104704488