

SF-RAD Metadata Specifications for:

Concentration

Importance 1: Required, 0: Optional

SF-RAD Field Name	Definition	Importance
concentration_method	Method used to concentrate the sample prior to analysis of the concentrate	1
concentration_protocol	Name, link, or brief description of the protocol utilized for the concentration method of wastewater samples	0
tot_conc_vol	Total volume of wastewater sample concentrated (if concentrated); this total volume is not necessarily assayed and is not necessarily equal to the value specified in 'equiv_sewage_amt'	0
sample_id	Location code-date-01 combination indicating what wastewater sample is being utilized	1
mg_cl_added	Milliliters of MgCl ₂ (51%) added to the sample	0
h_cl_added	Number of drops or mL of 10% HCl added to the sample	0
ph_initial	pH before treatment (HCl, MgCl ₂)	0
ph_final	pH after the treatment (HCl, MgCl ₂)	0
post_treatment_ID	fully "treated" (with OC43, MgCl ₂ & HCl) wastewater sample utilized for electronegative filtration	1
filter_1a_volume	Volume passed through electronegative filter sent to Sion's lab, in mL	0
filter_1b_volume	Volume passed through electronegative filter sent to Sion's lab, in mL	0
aliquot_id_um_williams_en	Sample ID for the aliquot generated for Sion's lab (-13)	0
filter_2a_volume	Volume passed through electronegative filter sent to Weill Cornell, in mL	0
filter_2b_volume	Volume passed through electronegative filter sent to Weill Cornell, in mL	0
aliquot_id_cornell_en	Sample ID for the aliquot generated for Cornell (-14)	0
filter_3a_volume	Volume passed through electronegative filter sent to M. Sharkey, in mL	1
filter_3b_volume	Volume passed through electronegative filter sent to M. Sharkey, in mL	1
aliquot_id_um_sharkey_en	Sample ID for the aliquot generated for M. Sharkey (-15)	1
shield_date_time	Time and date of completion for filtration process with addition of DNA/RNA shield solution	0
tube_volume_um_williams	Volume of centrifuge tube used during filtration, mL	0
tube_volume_cornell	Volume of centrifuge tube used during filtration, mL	0
tube_volume_um_sharkey	Volume of centrifuge tube used during filtration, mL	0
shield_volume	Volume of DNA/RNA shield solution used for storage of samples following filtration, mL	1
filter_insertion		0
ph_meter	Serial number/other designation of pH meter used to test all pH values	0
ph_calibration	Buffers used to calibrate pH meter	0
concentration_notes	Additional notes of filtration process	0
ww_split_id_manual_bead	15 mL centrifuge tube containing wastewater + OC43 for manual CERES magnetic bead concentration (-52)	1
sewage_color	qualitative assessment: color of sewage prior to magnetic bead concentration	0
sewage_turbidity	qualitative assessment: turbidity of sewage prior to magnetic bead concentration	0
particulate_amount	qualitative assessment: rough estimate of visible particulate amount within sewage prior to magnetic bead concentration	0
particulate_color	qualitative assessment: color of visible particulate within sewage prior to magnetic bead concentration	0
ww_appearance_notes	any additional notes describing the overall appearance of a wastewater sample prior to magnetic bead concentration	0
ww_volume_manual_bead	volume of wastewater + oc43 utilized for the CERES manual magnetic bead approach	1
recovery_cntl_added_manual_bead	Was a recovery control added to the wastewater sample prior to being utilized for manual magnetic bead concentration? Y/N	0
initial_ww_volume_manual_bead	volume of wastewater + oc43 before manual mag bead process occurs	1
volume_beads_used	volume in microliters of magnetic viral particles utilized to concentrate wastewater sample	0
bead_manufacturer	Manufacturer of beads	0
incubation_time_ww_on_beads	how long were the beads left to incubate with the beads suspended in the wastewater matrix?	0
incubation_time_beads_on_magnet	how long were the beads and wastewater sample left to incubate/separate on the magnetic stand?	0
volume_PBS_manual_bead_wash	volume of PBS used for first wash of beads from the walls of the sample tube following incubation of the W.W. + Beads on the magnetic stand	0
volume_shield_manual_bead	volume in microliters (uL) of DNA/RNA shield the beads will be stored in forming the 'concentrate'	1
manual_bead_concentrate_id_um_williams	zz delegation of resulting concentrate from the CERES manual magnetic bead concentration process, sample kept at OGSR (-32)	0
volume_manual_bead_concentrate_um_williams	total volume of magnetic beads within DNA/RNA shield following completion of concentration process (OGSR concentrate)	0
manual_bead_concentrate_id_um_sharkey	zz delegation of resulting concentrate from the CERES manual magnetic bead concentration process, sample sent to CFAR (-18)	0
volume_manual_bead_concentrate_um_sharkey	total volume of magnetic beads within DNA/RNA shield following completion of concentration process (CFAR concentrate)	0
manual_bead_concentrate_id_cornell	zz delegation of resulting concentrate from the CERES manual magnetic bead concentration process, sample sent to Weill Cornell Medicine (-40)	0
volume_manual_bead_concentrate_cornell	total volume of magnetic beads within DNA/RNA shield following completion of concentration process (WCM concentrate)	0
notes_manual_bead	Any notes relating to the process of manual magnetic bead concentration	0
ww_split_id_apex	Centrifuge tube containing wastewater + OC43 for King Fisher APEX Automated magnetic bead concentration (-19)	1

SF-RAD Field Name	Definition	Importance
volume_input_apex	Volume of raw sewage input into Apex KingFisher. If more than one tube run and then combined in the end, add up the volumes in all tubes for the sample.	0
volume_concentrate_output_apex	Volume of concentrate in the output from the Apex KingFisher.	0