

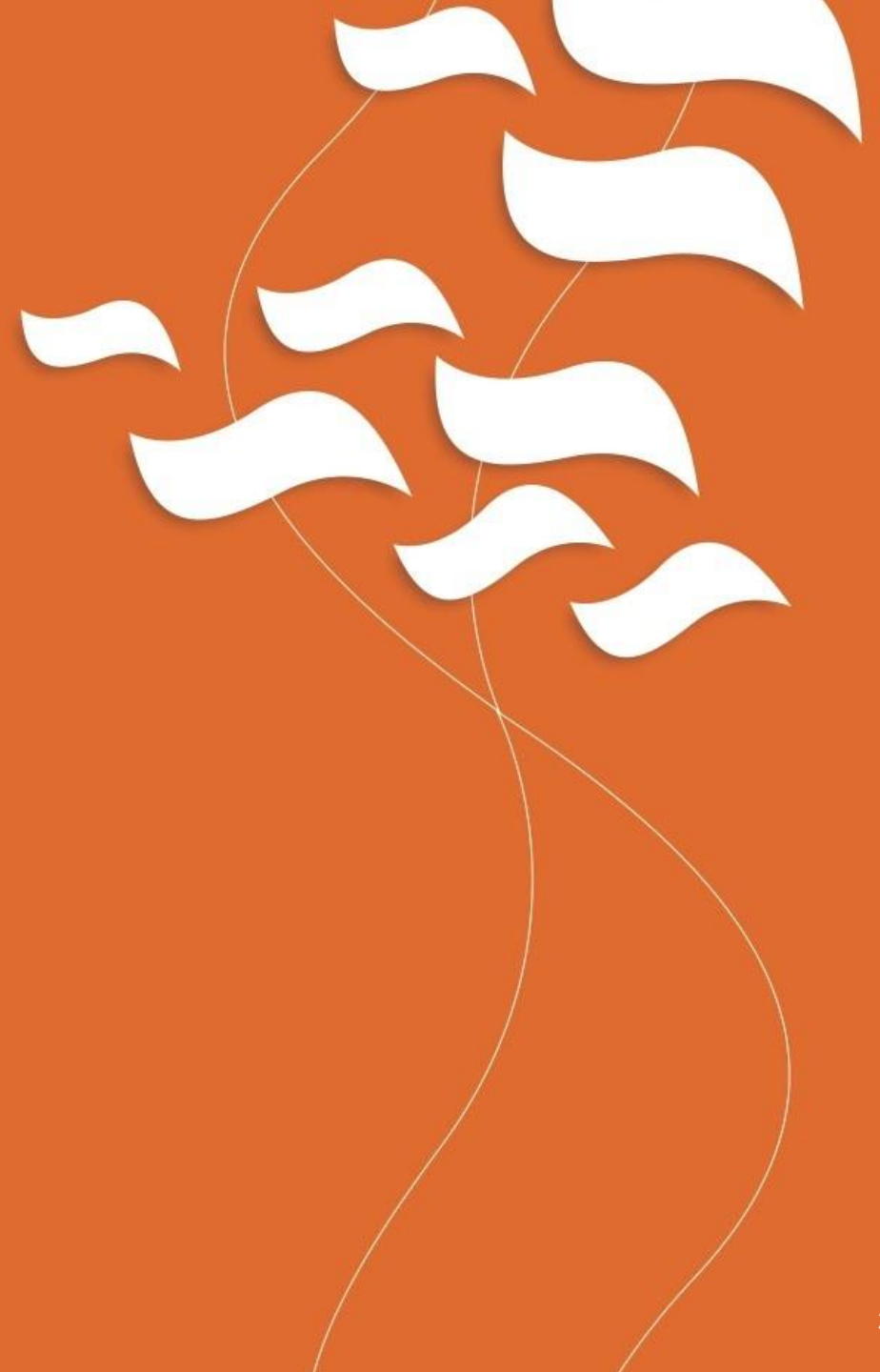


**BIOPHARMA
SERVICES
SAMPLE
SUBMISSION
GUIDELINE**



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Extraction Submission Guidelines

SAMPLE TYPE	STORAGE METHOD	QUANTITY RECOMMENDED	SHIPMENT METHOD
FFPE*	Slides	4 slides at 10um per slide	Room Temperature
	Curls in Eppendorf tube	2 - 4 curls / tube	
Cell	Cells resuspended in Qiagen Cell Protect	> 50k cells	Dry Ice
	Flash frozen cell pellet		
Tissue	Flash frozen tissue	> 30 mg	Dry Ice
	Tissue resuspended in Qiagen RNALater		

*FFPE: Formalin-Fixed, Paraffin-Embedded

For extraction services from other types of samples, please inquire with our Project Management team at custom-services@admerahealth.com.

Extraction Submission Guidelines (cont.)

SAMPLE TYPE	STORAGE METHOD	QUANTITY REQUESTED	SHIPMENT METHOD
Whole Blood	Fresh blood in EDTA tube	2 mL 2 tubes / sample	Blue ice or room temperature up to 24 hours
	Frozen blood in EDTA tube		Dry Ice
	Frozen blood in PAXgene tube		Dry Ice
Plasma / Serum	Frozen plasma / serum in Eppendorf tube	> 500 µL	Dry Ice
Exosome	Exosome resuspended in 1 x PBS	50 µL	Dry Ice
Saliva		> 1 mL	Dry Ice
Stool		> 100 mg	Dry Ice

* Different requirements for ATACseq and Hi-C services.

For extraction services from other types of samples, please inquire with our Project Management team at custom-services@admerahealth.com.

RNA Submission Guidelines

SAMPLE TYPE	PROTOCOL	RECOMMENDED QUANTITY	RECOMMENDED CONCENTRATION	MINIMUM QUANTITY	MINIMUM CONCENTRATION	QUALITY	BUFFER; SHIPMENT METHOD
RNA-seq <i>mRNA enriched</i>	Standard input	1ug	> 10 ng/μL	200 ng	> 5 ng/μL	RIN > 7	RNase-free water; Ship with dry ice; All RNA samples must be RNA-free
	Ultra-low input	20ng	> 1 ng/μL	20 pg	> 1 pg/μL		
	3' Tag seq	1ug	> 50 ng/μL	2 ng	> 0.2 ng/μL	Recommended DV200 > 50%	
RNA-seq <i>ribosomal RNA depleted</i>	Standard input	1ug	> 50 ng/μL	200 ng	> 10 ng/μL	Acceptable DV200 30% - 50%	
	Ultra-low input	20ng	> 1 ng/μL	500 pg	> 0.04 ng/μL		
Small RNAseq	Standard input	1ug	> 100 ng/μL	200 ng	> 20 ng/μL	RIN > 7	
	Ultra-low input	20ng	> 2 ng/μL	2 ng	> 0.2 ng/μL		

DNA Submission Guidelines

SAMPLE TYPE	RECOMMENDED QUANTITY	RECOMMENDED CONCENTRATION	MINIMUM QUANTITY	MINIMUM CONCENTRATION	BUFFER; SHIPMENT METHOD	NOTES
Genomic DNA – WGS/WES/Custom Panel Metagenomics/Amplicon	500 ng	> 30 ng/μL	30 ng	> 5 ng/μL	Tris buffer** or Low TE buffer**; Ship with blue ice or Dry Ice	
Genomic DNA – RADseq/ddRADseq	500 ng – 1 μg	> 30 ng/μL	100 ng	> 5 ng/μL		
FFPE* DNA	500 ng	> 30 ng/μL	50 ng	> 10 ng/μL		Fragments should be longer than 1500 bp
Genomic DNA – 16S/ITS	5 ng – 50 ng	> 1 ng/μL	1 ng	> 0.2 ng/μL		
Genomic DNA – WGBS	500 ng – 1 μg	> 10 ng/μL	100 ng	> 5 ng/μL		We recommend sending non-bisulfite treated samples.
Immunoprecipitated DNA for ChIPseq	5 – 10 ng	> 0.2 ng/μL	500 pg	> 0.05 ng/μL		
HMW DNA for Pacbio seq	20 μg	> 100 ng/μL	10 μg	> 100 ng/μL		

* FFPE: Formalin-Fixed, Paraffin-Embedded

**Tris buffer contains 10 mM Tris-HCl and Low TE contains 10 mM Tris-HCl (pH8.0) with 0.1 mM EDTA

For extraction services from other types of samples, please inquire with our Project Management team at custom-services@admerahealth.com.

Cell Submission Guidelines

SAMPLE TYPE	LIBRARY PREPARATION	QUANTITY REQUESTED	BUFFER; SHIPMENT METHOD	NOTES & RECOMMENDATIONS
Cell	ATAC-Seq	1M Cells – See Notes/Recommendations	Sorted Cryopreserved Cells in Single Cell Suspension; Dry Ice	Further information required – please contact Project Management Team Dead Cell Removal Available
	Hi-C <i>Require Replicate Tubes Per Sample</i>	5M Crosslinked Cells, in duplicate	Sorted Cryopreserved Cells in Single Cell Suspension; Dry Ice	
	10X	Refer to 10X Submission Guidelines or 10X Cell Prep Guidelines		
	RNA seq <i>mRNA enriched</i>	1 - 1,000 cells	PSS Buffer; Refer to guideline here . Dry Ice	Library preparation directly from cells **If extraction is needed, refer to Extraction Submission Guidelines Cells/Cell Pellet for RNA/DNA Extraction
	RNA seq <i>ribosomal RNA depleted</i>	10 - 1,000 cells	PBS; Refer to guideline here . Dry Ice	

Please send cells to arrive between Monday and Wednesday.

1-week advanced notice on project arrivals are required.

Please inquire with our Project Management team at custom-services@admerahealth.com.

10X Submission Guidelines - Cell

SAMPLE TYPE	QUANTITY	QUALITY	SHIPPING METHOD
Cell	<p>Live <u>Recommended</u> > 1M cells / sample, in duplicate</p> <p><u>Minimum</u> 200K cells / sample, in duplicate</p>	<p><u>Recommended</u> > 90% viability</p> <p><u>Acceptable</u> 70 - 90% viability</p> <p><u>Dead Cell Removal Required</u> 50 - 70% viability* Minimum 300K cells</p>	<p><u>Fresh cell</u> Courier service within 4 hour driving distance*</p> <p><u>Cryopreserved cell</u> Dry Ice</p>
	<p>Cryopreserved <u>Recommended</u> > 1M cells / sample, in duplicate</p> <p><u>Minimum</u> 500K cells / sample, in duplicate</p>	<p><u>Fail QC</u> < 50% viability</p>	

*Please inquire with our Project Management team at custom-services@admerahealth.com.

10X Submission Guidelines - Tissue

SAMPLE TYPE		QUANTITY	QUALITY	SHIPPING METHOD	NOTES & RECOMMENDATIONS
Tissue	Single Cell RNASeq	<p><u>Fresh tissue</u> > 100mg / sample</p> <p><u>Cryopreserved tissue*</u> Please contact Project Management Team for more information</p>	<p><u>Recommended</u> >90% viability</p> <p><u>Acceptable</u> 70-90% viability</p> <p><u>Dead Cell Removal Required</u> 50%-70% viability* Minimum 300K cells</p> <p><u>Fail QC</u> <50% viability</p>	<p><u>Fresh tissue</u> Stored in MACS tissue storage buffer and send with ice pack</p> <p>See for more details here.</p> <p><u>Cryopreserved tissue</u> Dry Ice</p>	Post tissue dissociation, refer to cell quantity/quality requirements .
	Single Nuclei RNASeq	<p><u>Fresh tissue</u> > 100mg / sample</p> <p><u>Flash-frozen tissue</u> 30mg / sample, 3 tubes / sample</p> <p><u>Cryopreserved tissue*</u> Please contact Project Management Team for more information</p>	NA	<p><u>Fresh tissue</u> Stored in MACS tissue storage buffer and send with ice pack</p> <p>See for more details here.</p> <p><u>Cryopreserved tissue</u> Dry Ice</p> <p><u>Flash frozen tissue</u> Dry Ice</p>	Pilot using Chromium Next GEM Single Cell 3' LT for single nuclei RNAseq

*Please inquire with our Project Management team at custom-services@admerahealth.com.

Sequencing Only Submission Guidelines

ILLUMINA SEQUENCER	QUANTITY REQUIRED*	VOLUME	SAMPLE TYPE
HiSeq	4nM	≥ 10 µL	Library
NovaSeq	3nM	≥ 30µL per lane or ≥ 400µL per FlowCell	Library
MiSeq	4nM	≥ 10 µL	Library
NextSeq	4nM	≥ 10 µL	Library
Custom Primers	100uM	≥ 20 µL	Custom Primers* Please contact Project Management Team for more information

SHIPPING INSTRUCTIONS: FRESH TISSUE

Recommendations:

- Admera Health recommends sending a mock shipment of samples to ensure cell viability.
- Please notify the Project Management team at custom-services@admerahealth.com at least one week prior to sample delivery.
- Samples should be shipped for arrival at facility on Monday – Wednesday.

Preparing Shipment

1. We suggest to start with 100mg of tissue and always keep your sample on ice during the process.
2. Upon dissection, transfer the tissue to a 2mL or 5mL Eppendorf tube and fill up the tube with **MACS Tissue Storage Solution**. Ensure that the tissue is fully submerged in the solution. Put the sample on ice from now on.

*MACS tissue buffer helps to maintain cell viability for up to 48 hrs.
3. Wrap the tube with paraffin and wrap the tube in absorbent paper towels and place them in separate sealed plastic bags. Wrap each bag in bubble wrap.
4. Print and complete shipping form.
5. Place completed form in a sealed plastic bag and include in the shipment container.
6. Place sample tubes and shipping forms in polystyrene box with **enough ice pack** and fill empty space within the box with bubble wrap or packing material to ensure that materials do not move during shipping.
7. Place the polystyrene box into a slightly larger cardboard box and seal with packing tape.
8. Ship package with Next-Day delivery service (e.g., FedEx Priority Overnight or UPS Next Day Air).
9. Email completed sample submission form and tracking number to custom-services@admerahealth.com.

SHIPPING INSTRUCTIONS: FROZEN CELL LINES

Recommendations:

- Admera Health recommends sending a mock shipment of samples to ensure cell viability.
- Please notify the Project Management team at custom-services@admerahealth.com at least one week prior to sample delivery.
- Duplicate samples are required
- It is highly recommended to count the cells before freezing using hemocytometer or another cell counting device.

Preparing Shipment

1. Place the cryovials inside a 50mL conical tube.
2. Print and complete the shipping form.
3. Place the completed form in a sealed plastic bag and include it in the shipment container.
4. Ship the materials in a polystyrene box with at least 1" thick walls and minimal dimensions of 8"x6"x4". Include at least 5lbs of dry ice for each day of transit.
5. Ensure that there is a Dry Ice label on the outside of the shipment.
6. Ship package with Next-Day delivery service (e.g., FedEx Priority Overnight or UPS Next Day Air).
7. Email the completed sample submission form and tracking number to custom-services@admerahealth.com.

SHIPPING INSTRUCTIONS: LIVE CELL LINES

Recommendations:

- Admera Health recommends sending a mock shipment of samples to ensure cell viability.
- Please notify the Project Management team at custom-services@admerahealth.com at least one week prior to sample delivery.
- Samples should be shipped for arrival at facility on Monday – Wednesday.

Preparing Shipment

1. Seed cells into one T25 flask.
2. Prepare to ship the samples on Day 2 or 3 after passage or seed the culture with 600,000 to 800,000 cells. Cultures must be actively dividing when shipped (log phase).
3. Fill the T25 flask to capacity with warmed media, tighten the cap, and seal it with parafilm.
 - a. Use plug-seal caps only. Do not use vented caps.
4. Print and complete shipping form.
5. Place completed form in a sealed plastic bag and include it in the shipment container.
6. Wrap the T25 flask and media tube in absorbent paper towels and place them in separate sealed plastic bags. Wrap each bag in bubble wrap.
7. Place the culture flasks and shipping forms in the polystyrene box.
 - a. Fill empty space within the box with bubble wrap or packing material to ensure that materials do not move during shipping.
 - b. If shipping in colder climates, adding a temperature control packaging (e.g., Saf-T-Pak Phase Control Material) can stabilize the culture temperature during transit.
8. Place the polystyrene box into a slightly larger cardboard box and seal with packing tape. Ship it at Room Temperature.
9. Ship package with Next-Day delivery service (e.g., FedEx Priority Overnight or UPS Next Day Air).
10. Email completed sample submission form and tracking number to custom-services@admerahealth.com.

SHIPPING GUIDELINES

Please ship samples to:

Admera Health, LLC
126 Corporate Blvd.
South Plainfield, NJ 07080
Attn: BioPharma Services

Please follow these instructions when shipping your samples:

1. Include the Admera Health Quote # on your shipment package.
2. Complete and send electronic Sample Submission Form to custom-services@admerahealth.com.
3. Ensure your samples arrive between Monday and Friday to avoid samples sitting over the weekend.

For cells: please ensure that you notify the Project Management team one week ahead of sample arrival and arrange for samples to arrive between Monday and Wednesday.

Unless otherwise specified, clients are responsible for all shipping charges.