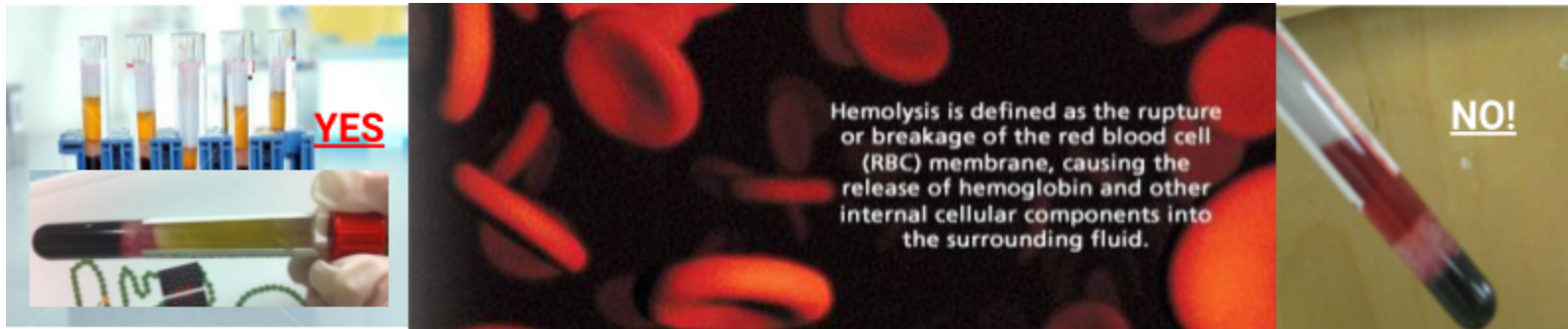


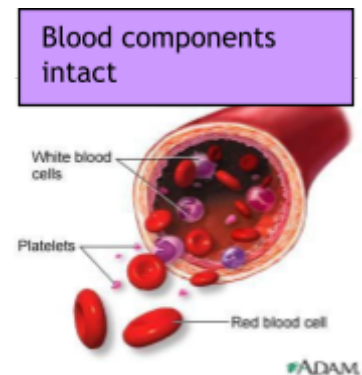
Hemolysis in the Clinical Laboratory



Hemolysis = Rupture of Red Blood Cells = Hemoglobin released = Hemolyzed Sample

Hemolyzed samples cause many issues in the clinical laboratory such as:

- False elevation of some analytes such as potassium and lactate dehydrogenase
- Color Interference with test methodologies that use spectrophotometry causing inaccurate results
- Increase in turn around time for results due to recollection and processing



What causes hemolysis?

- Traumatic venipuncture
- Small needle size causing increase pressure on the red cells
- Unnecessary pressure on cells when transferring to collection tubes
- Incompatible transfer connector devices
- Tourniquet time too long
- IV Starts
- Skill level of phlebotomist

How to obtain a good sample for testing?

- Limit tourniquet time to 1 minute
- Allow vacuum to pull blood into tubes
- Pull gently when drawing with a syringe from an IV
- Make sure your tubing and needle sizes are compatible
- Use a vacutainer



Hemolysis Chart

Test	Hemolysis		Test	Hemolysis
ALP	1+ Accept 2+ Accept 3+ Accept 4+ Reject		K+	1+ Accept 2+ Reject 3+ Reject 4+ Reject
B12	1+ Accept 2+ Reject 3+ Reject 4+ Reject		LAC	1+ Accept 2+ Reject 3+ Reject 4+ Reject
BTNP	1+ Accept 2+ Accept 3+ Reject 4+ Reject		Mag	1+ Accept 2+ Reject 3+ Reject 4+ Reject
Chol	1+ Accept 2+ Reject 3+ Reject 4+ Reject		Phos	1+ Accept 2+ Reject 3+ Reject 4+ Reject
CK	1+ Accept 2+ Reject 3+ Reject 4+ Reject		TBIL	1+ Accept 2+ Reject 3+ Reject 4+ Reject
CKMB	1+ Accept 2+ Accept 3+ Reject 4+ Reject		TP	1+ Accept 2+ Reject 3+ Reject 4+ Reject
Folate	1+ Accept 2+ Reject 3+ Reject 4+ Reject		Trig	1+ Accept 2+ Reject 3+ Reject 4+ Reject
FT3	1+ Accept 2+ Reject 3+ Reject 4+ Reject		TRNP	1+ Accept 2+ Reject 3+ Reject 4+ Reject
Hpt	1+ Accept 2+ Reject 3+ Reject 4+ Reject		TRPQ	1+ Accept 2+ Accept 3+ Reject 4+ Reject
IBC	1+ Accept 2+ Reject 3+ Reject 4+ Reject		TSH	1+ Accept 2+ Accept 3+ Reject 4+ Reject
			Uric Acid	1+ Accept 2+ Reject 3+ Reject 4+ Reject