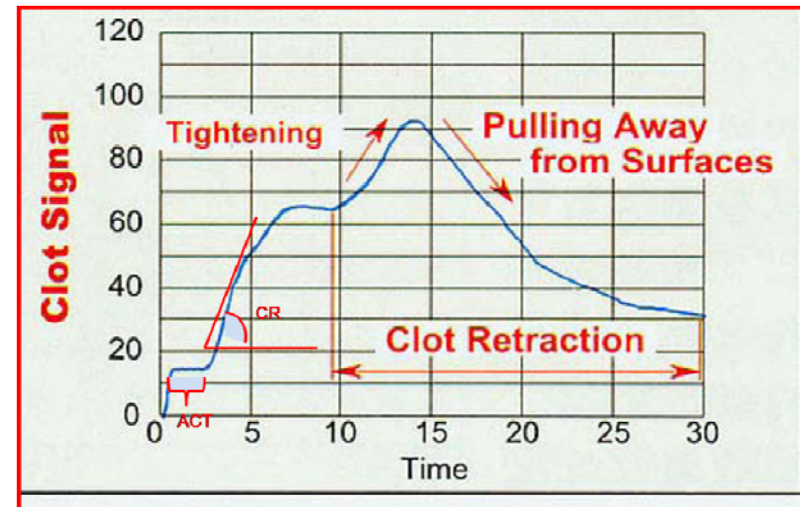
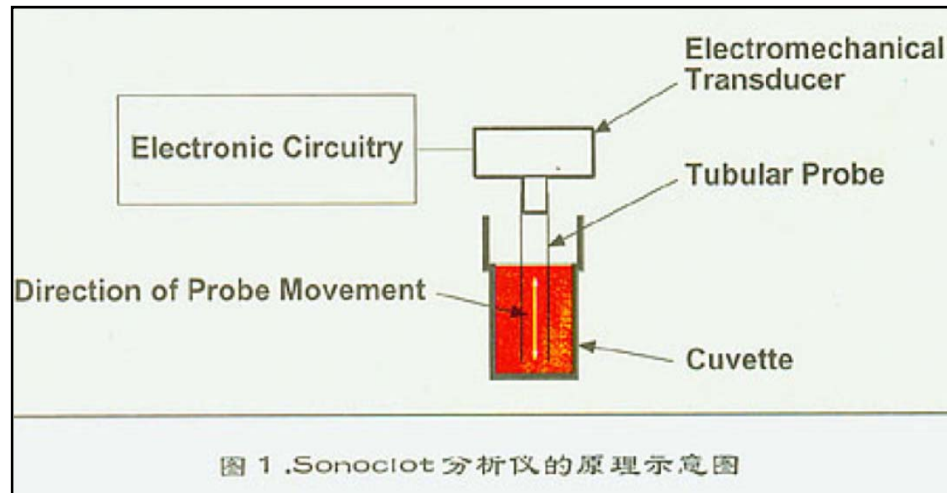


# working principle



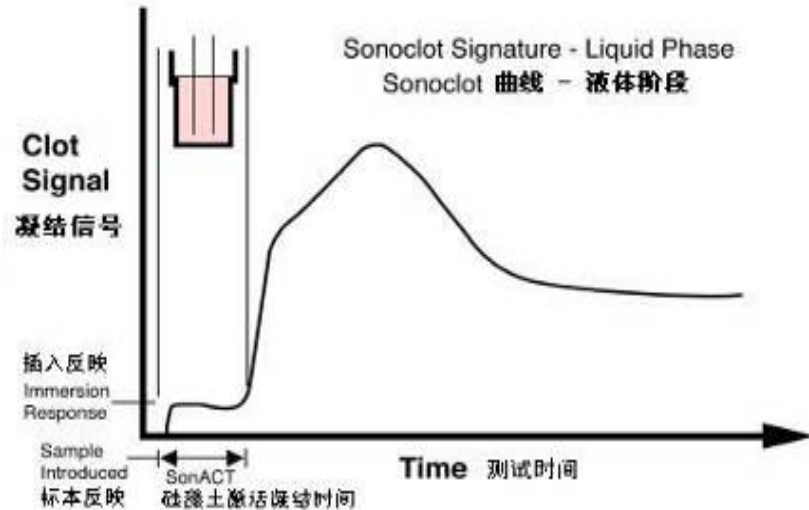
Sonoclot normal curve

**Ultrasonic sensor + probe + blood sample (0.36 ml)-200Hz up and down vibration-recording the resistance encountered and converted into analog signal-output by the computer in the form of an activation signal (clot signal)-actually recording the whole process of blood coagulation Viscoelastic changes.**

**Detection parameters:**

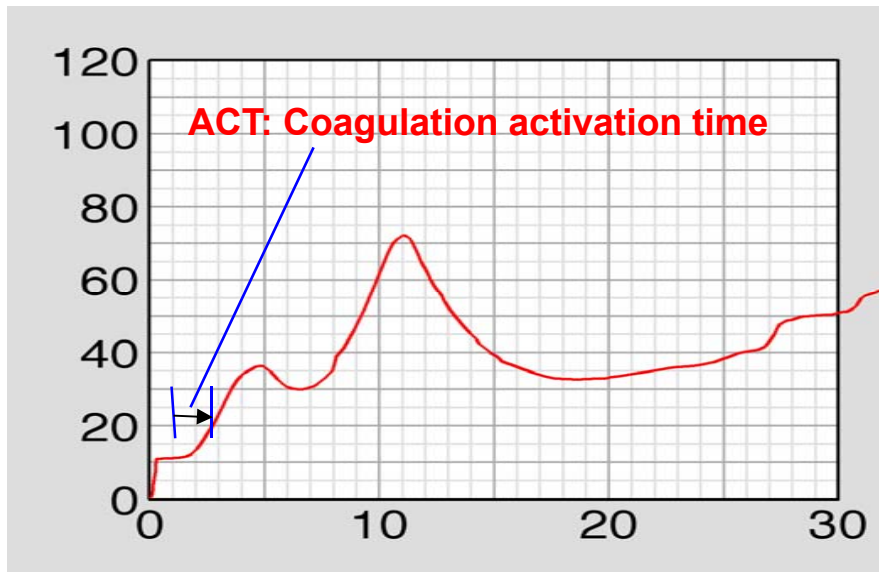
- 1、 ACT (gbACT, Coagulation activation time )**
- 2、 CR(clot rate, Coagulation rate)**
- 3、 PF(platelet function)**

# Coagulation signal chart and indicators

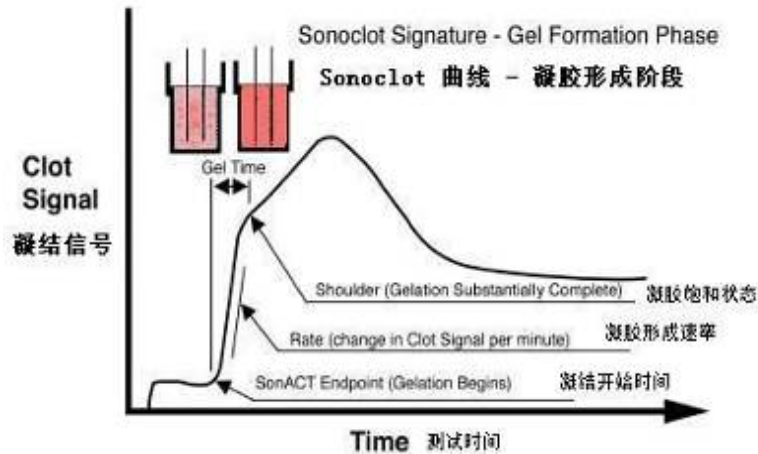


The first step: coagulation factors interact with each other

- Inserting the probe, the continuous reaction of the coagulation factors in the blood sample, the blood viscosity changes, and the curve remains level at this time.
- **ACT**(Activated clotting time)-the time for the sample to appear liquid

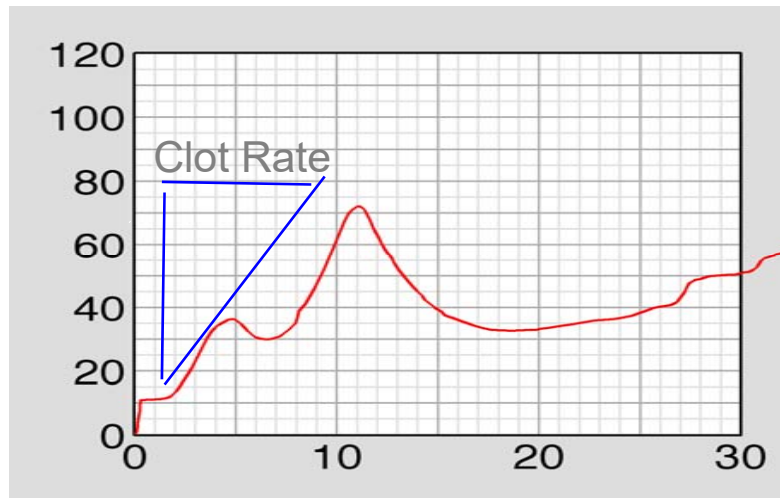


# Coagulation signal chart and indicators



## Step 2 Fibrin formation

- As the coagulation reaction progresses, the sample gradually evolves from liquid to gel. When small molecules of fibrinogen become large molecules of fibrin, blood viscosity changes, and the coagulation signal gradually strengthens as the gel develops.
- **CR** (clot rate: Speed of fibrin turns into fibrin gel in unit time)
- Normal value 10-35

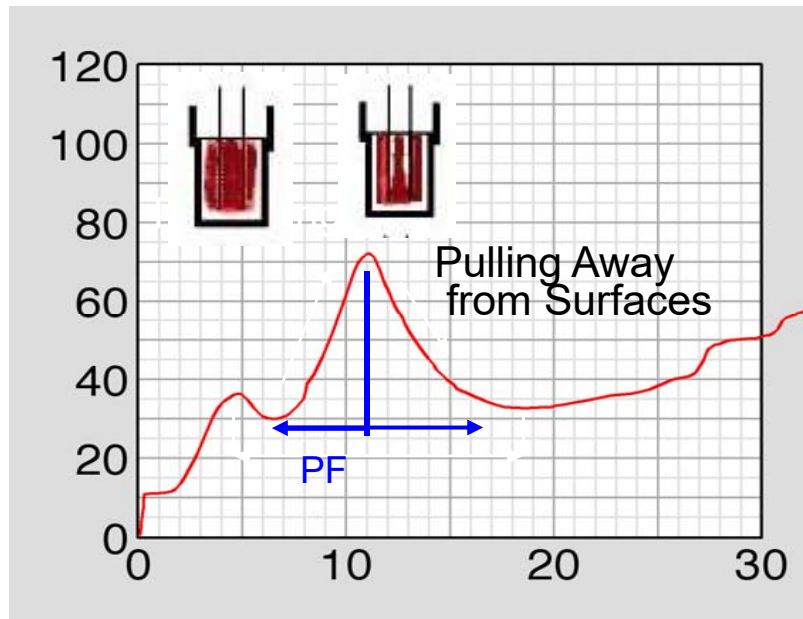


# Coagulation signal chart and indicators



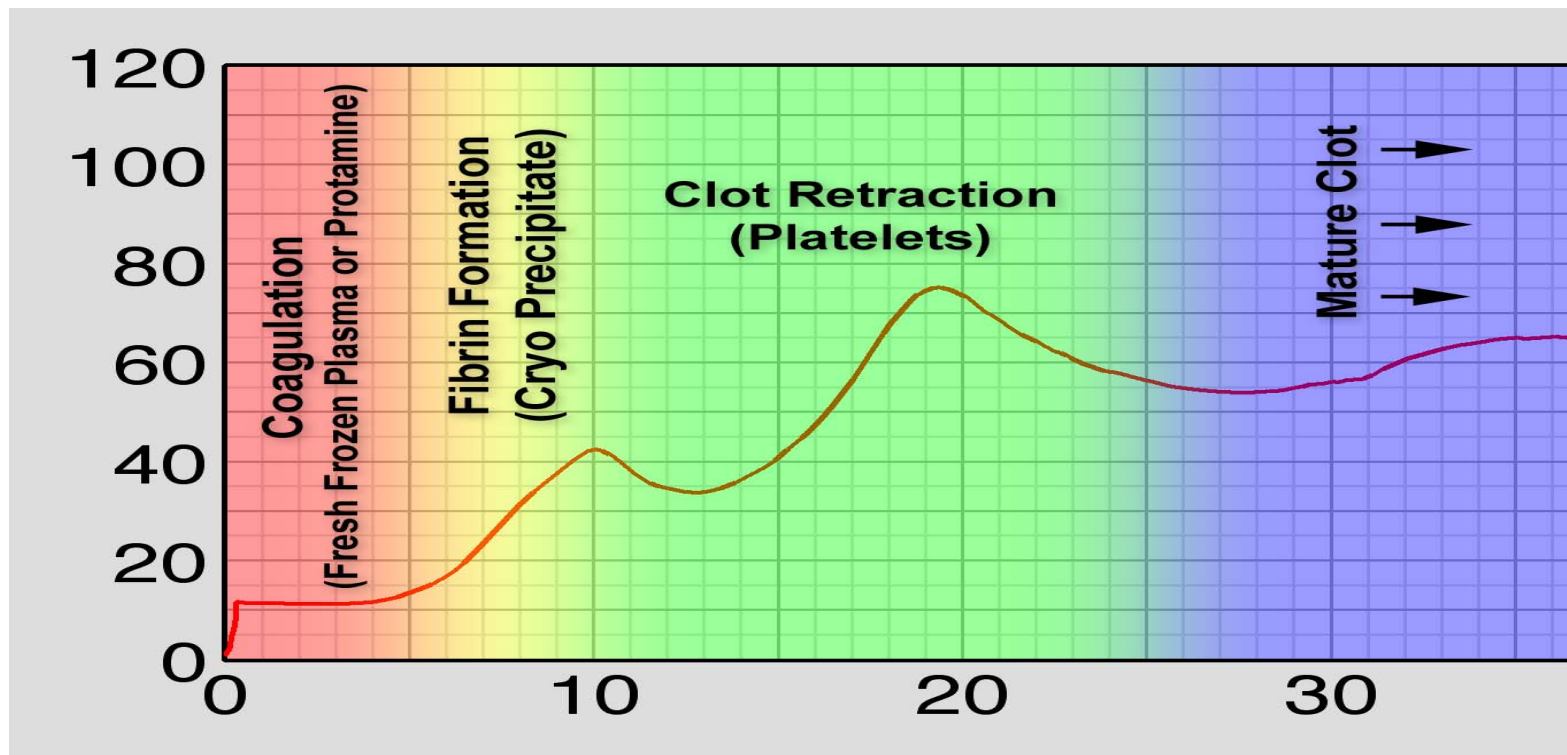
## Step 3: Retraction of blood clot

- ❑ The Sonoclot analyzer is very sensitive to the physical changes of the sample during the clot withdrawal process
- ❑ PF (platelet function) —Reflect the function index of platelets and platelets and fibrin binding
- ❑ Normal value 1-4.5



## Use Sonoclot images to guide the use of blood products

The different parts of the Sonoclot graph reflect the different stages of the coagulation cascade. According to the abnormality of the curve, the cause of the coagulation abnormality is judged, and the infusion of blood products is targeted.



# Clinical significance of various indicators

Monitoring results	Clinical significance	Recommended treatment
ACT↑ CR ↓	Insufficient antagonism of fish sperm or excessive anticoagulation, lack of coagulation factors, low fibrinogen function	Anticoagulant neutralization of excess protamine, Infusion of fresh frozen plasma, cryoprecipitate,
ACT→CR↓	Fibrinogen deficiency, low fibrinogen function	Cryoprecipitate or fibrinogen
ACT→ CR↑	Hypercoagulability or prethrombotic state	Anticoagulant therapy
ACT ↓ CR↑	Severe hypercoagulability or early DIC	Anticoagulant therapy
ACT ↑ CR→	Anticoagulant therapy is effective and safe, fish sperm antagonizes the right amount; lack of coagulation factor	Plasma transfusion
ACT↓ CR↑	Insufficient anticoagulation or heparin resistance; high risk of thrombosis	Anticoagulant therapy
ACT↑ CR↓PF↓	Lack of coagulation factors, lack of fibrinogen, low platelet function	Transfusion of fresh frozen plasma, cryoprecipitate
ACT→ CR→PF↓	Low platelet function	Platelet transfusion