




AU480/680 Sample Racks and Containers

The system identifies the rack type from the combination of magnets set into the bottom of the rack. The color of the rack is for the operator to easily identify the rack type.



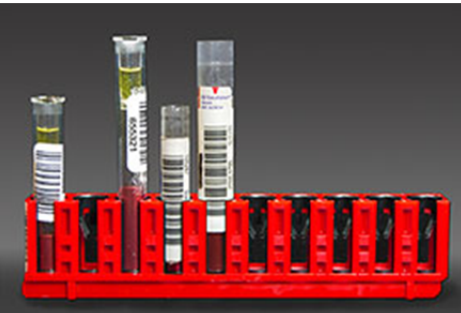
The system identifies the sample type for the rack from the rack ID bar code label. The rack ID bar code range for sample type is configured in the AU software. Available sample types: **Serum, Urine, Other-1, Other-2, Whole Blood (available on AU680 only)**. Place samples in the correct rack for sample type.

Any validated container can be used to process reagent blank, calibrators, QC, or patient samples in the appropriate rack type.

Blue Rack	
	<ul style="list-style-type: none">• Use to process reagent blanks• Use any validated container to place DI water in position 1• One rack is used for all sample types
Yellow Rack	
	<ul style="list-style-type: none">• Use to process calibrators• Multiple racks may be required depending on number of calibrators and sample types used• Racks may be configured for rack ID and position or bar code operation
Green Rack	
	<ul style="list-style-type: none">• Use to process QC material• Multiple racks may be required depending on number of controls and sample types used• Racks may be configured for rack ID and position or bar code operation




Patient Sample Rack Types

- **Barcode analysis:** Bar coded samples may be placed in any position in the rack programmed for the correct sample type
- **Sequential analysis:** Samples without bar codes must be placed in numeric order by their sample number order. Do not leave empty spaces between samples






White Rack	
	<ul style="list-style-type: none"> • Use for routine patient samples • Use for Automatic Repeat samples (repeat is automatically ordered and processed by the analyzer in the same rack)
Orange Rack	
	<ul style="list-style-type: none"> • Use for Manual Repeat samples (repeat is automatically ordered by the analyzer, but only processed when placed into an orange rack) • Samples that require repeat are identified from the Repeat Run Pending List
Red Rack	
	<ul style="list-style-type: none"> • Can be used to designate a different sample category • Defined as Emergency rack in the software, but samples placed in a red rack do not process with higher priority • Can also be used for Automatic Repeat samples

AU480/680 Validated Sample Containers





Note: BD indicates a Becton Dickinson part number. The BD tube or its equivalent can be used.

Placement	Container Type	Description	Part Number	Dead Volume (µL)	Example	
Rack / STAT Table	Primary Tube	Serum Separator Tube 13x100 mm	BD 367986	4 mm above the non-sample (cells or gel) layer		
		Serum Separator Tube 16x100 mm	BD 367988			
		Lithium heparin with gel separator (light green top) 13x75 mm	BD 367960			
		Lithium heparin with gel separator (light green top) 13x100 mm	BD 367962			
		Lithium heparin (green top) 13x75 mm	BD 367884			
		Lithium heparin (green top) 13x100 mm	BD 367886			
		Primary tube (red top) 13x75	BD 366668			140
		Primary tube (red top) 13x100	BD 367815			
	Aliquot Tube	Auto Aliquot Tube 13 mm	2910034	AU480 = 90 AU680 = 80		
	Sample Cup	Hitachi Cup 2.0 mL	MU853200	50		

AU480/680 Sample Containers

Placement	Tube Part Number	Nested / Insert Cup		Dead Volume (µL)	Example
		Description	Part Number		
Rack: Cup Nested (Inserted) in Tube	13x75 mm BD 367960 BD 367884 BD 366668	Access 2 Cup 1.0 mL	81915	140	
	13x100 mm BD 367962 BD 367886 BD 367815				
	13x75 mm BD 367960 BD 367884 BD 366668	EZ Nest Cup	1270013000	AU480 = 60 AU680 = 50	
	13x100 mm BD 367962 BD 367886 BD 367815				
	16x75 mm BD 364976	EZ Nest Cup	1270016000	50	
	16x100 mm BD 367988				
	SST 16x100 mm BD 367988	Hitachi Cup 2.0 mL	MU853200	50	
	DxC Transfer Tube 979272	DxC Cup 2.0 mL	652730	AU480 = 60	
Access 2 Cup 2.0 mL		81902	AU680 = 50		

AU480/680 Sample Containers

Placement	Tube Part Number	Nested / Insert Cup		Dead Volume (µL)	Example
		Description	Part Number		
Warning: The analyzer has only one sensor to detect the cup or tube on the STAT table, therefore only one maximum probe downward stroke can be programmed. The maximum probe downward stroke must be programmed for the cup or tube with the lowest bottom position. If primary tubes and tubes with nested cups are both being used on the STAT table, the nested cup must contain sufficient sample to avoid a probe crash into the nested cup.					
STAT Table: Cup Nested (Inserted) in Tube	13x75 mm BD 367960 BD 367884 BD 366668	Access 2 Cup 1.0 mL	81915	140	
	13x75 mm BD 367960 BD 367884 BD 366668	EZ Nest Cup	1270013000	AU480 = 60 AU680 = 50	
	16x75 mm BD 364976	EZ Nest Cup	1270016000	50	
	DxC Transfer Tube 979272	DxC Cup 2.0 mL	652730	AU480 = 60	
Access 2 Cup 2.0 mL		81902	AU680 = 50		

Rack and Sample Container Usage

Follow these guidelines for proper rack and sample container usage to minimize sampling errors and prevent delayed results:

- **Caution: A field service engineer sets the sample probe descent and alignment for optimal sampling during your system installation. Do not change the type of containers used on a rack without consulting Beckman Coulter technical support**
 - Use of non-validated containers may result in sampling errors
 - Load racks on the rack supply component with position 1 of the rack (rack ID bar code end) facing the back of the analyzer
 - Always run the blue rack (reagent blank) in front of the yellow rack(s) (calibrators) to perform a complete calibration
 - Do not leave spaces between racks when loading. The rack feeder stops advancing when a space is left between racks
 - Place samples in the correct rack for sample type. If the sample is placed in the incorrect rack for sample type, the system will generate an alarm and will not process the sample
 - Racks are designated for barcode analysis or sequential analysis (no bar codes, manually program all samples). Bar coded samples are recommended to maintain positive patient identification
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Rack Adapters

Adapters are necessary to hold smaller diameter tubes (11.5 to 13.5 mm) firmly in position in the racks. Larger diameter tubes (13.6 to 16 mm) do not require adapters. To confirm that a tube fits correctly, place the tube into a rack with and without an adapter and determine which option holds the tube most securely.

Sample Integrity

The AU analyzer performs the following integrity checks during sample processing:

- Level sense
- Obstruction detection
- Adequate sample aspiration
- LIH (optional): LIH reagent is used to evaluate samples for lipemia, icterus and hemolysis