



The labware import file contains two definitions, seen at right. In both cases the tube holder is defined as a reservoir with six sections. The circular cross section of the tubes was translated into rectangular sections with the same area. This leaves volume calculations and liquid level tracking intact.¹

As a quick reminder, when labware is defined as a reservoir, Biomek assumes the sections contain “reagents” rather than “samples”, and tries to access those sections with as many tips simultaneously as possible. The number of tips that can access a section at the same time depends on the Y dimension of the section, with one tip for every 9 mm in section size. A section that is 18 mm in Y can be accessed by two adjacent tips, a 27 mm section by three tips and so on.

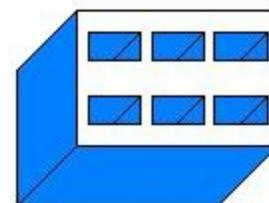
In the first definition, TubeRack_50ml_Res1, the Y dimension of the sections is 17 mm. The tubes are accessed with one tip at a time. The width of the sections was adjusted to maintain the same area as the actual ca. 29 mm diameter tubes.

In the second definition, TubeRack_50ml_Res2, the sections are defined as squares with ~ 24 mm edge length, which again corresponds with the size of the tubes. In this case, Biomek will access the tubes with two tips if the transfer step allows it. This can be beneficial in some cases, but keep in mind that two tips side by side cannot reach the narrow bottom of the tube. It is probably safest to only use TubeRack_50ml_Res1.

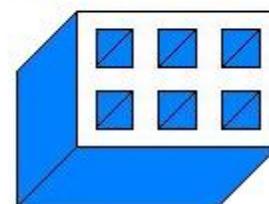
Patterns

Biomek does not allow the definition of well patterns based on labware of type reservoir, but there is an easy workaround. An additional labware definition named “TiterPlateSixWells” is provided in a separate import file, which can be used to define patterns that can then be applied to the tube rack.

When labware of type Reservoir is used in a pipetting step, patterns cannot be applied by selecting the pattern name from a droplist. Instead, the name of the pattern must be typed into the name field.



TubeRack_50ml_Res1



TubeRack_50ml_Res2



TiterPlateSixWells

Destination: P8 - SixWells_2_6

Use pattern SixWells_2_6 ——— Type the pattern name here

Use DataSet where its values

Use the wells selected below. Copy pattern ▾

¹ Defining the rack as a reservoir rather than a six well titerplate was necessary to overcome a bug in the Biomek software that manifests itself when wells in a titerplate are more than 21 mm apart (center to center) in the Y direction. In this tube holder, the center to center distance is 40 mm.