

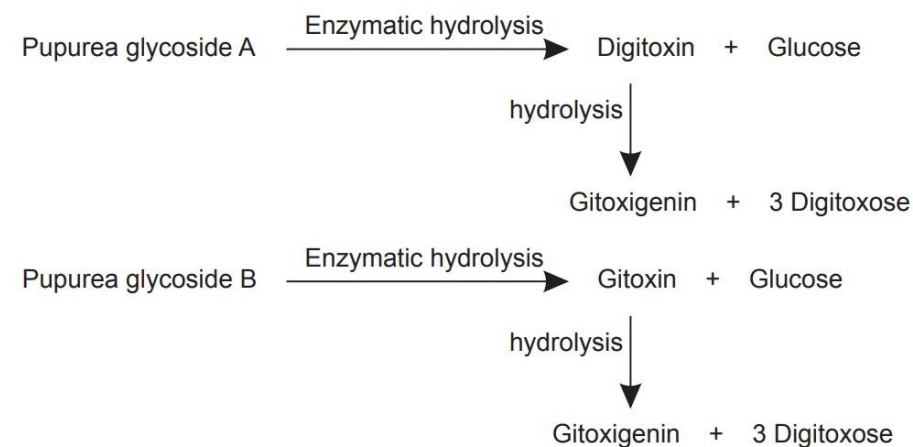
5.2 Cardiotonic

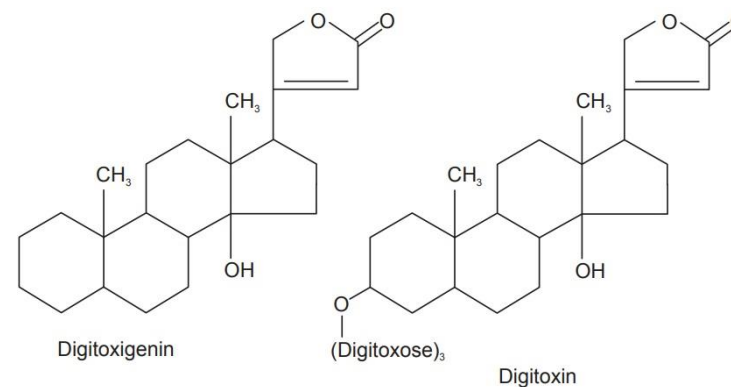
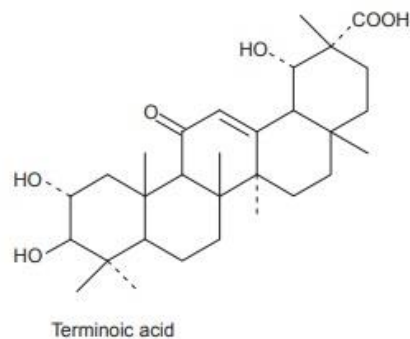
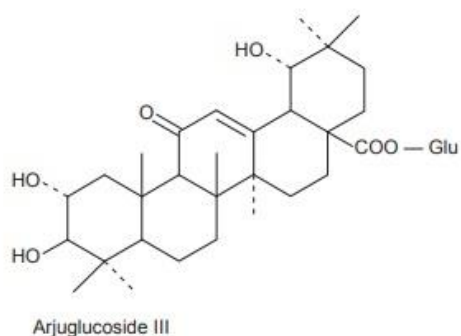
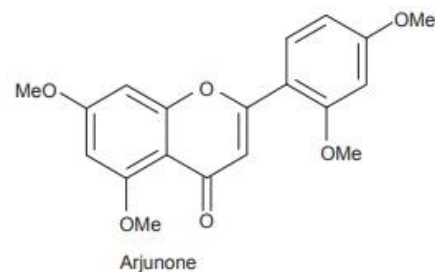
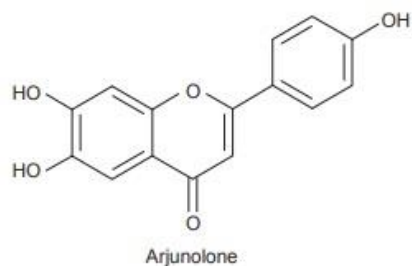
S. No.	Herbal Drug	Biological Source	Morphology	Chemical Constituent	Uses	Test
1.	Arjuna	Arjuna consists of dried stem bark of the plant known as Terminalia arjuna Rob, belonging to family Combretaceae .	From Image	<p>The dry bark from the stem contains about 20 to 24% of tannin.</p> <p>The tannins are reported to be present are (+) catechol, (+)gallocatechol, epicatechol, epigallocatechol, and ellagic acid.</p> <p>The flavonoids such as arjunolone, arjunone, and baicalein have been reported from the stem bark.</p>	Arjuna bark is used as a diuretic and astringent . The diuretic properties can be attributed to the triterpenoids present in fruits. It causes decrease in blood pressure and heart rate . The bark was extensively used in the past by the local tanneries for tanning animal hides.	Ethereal extract of arjuna shows pinkish fluorescence under ultra-violet light.
2.	Digitalis	It consists of leaves of Digitalis purpurea . Family: Scrophulariaceae .	<p>Colour - Dark grayish-green</p> <p>Odour - Slight</p> <p>Taste - Bitter</p>	<ul style="list-style-type: none"> • It mainly contains cardiac glycoside (about 0.2 to 0.45%). • It contains purpurea 	<ul style="list-style-type: none"> • It is a cardiac stimulant and tonic. • It also used as a diuretic. • It is used in the treatment 	<ul style="list-style-type: none"> • Baljet Test • Legal Test • Keller–Killiani Test

			<p>Size - 10-30 cm long and 4-10 cm wide</p> <p>Shape – Ovate-lanceolate to broadly ovate</p>	<p>glycoside A and purpurea glycoside B.</p> <ul style="list-style-type: none"> It also contains digitoxin, gitoxin, digitoxigenin, gitoxigenin, digitose, gitaloxin. It also contains saponin, flavanoids, tannins and pectin. 	of congestive heart failure.	
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Morphology of Arjuna

Colour	Colour of the outer side, as well as, inner side of bark is greyish-brown.
Odour	None
Taste	Astringent
Shape	Flats
Size	The pieces of various-sizes, about 15 × 10 × 1 cm
Extra features	The presence of the cork is not reported in the commercial drug. As arjuna is collected from the old trees, the cork gets removed due to exfoliation. The appearance of the transversely cut surface is dark brown with characteristic greyish shining patches.





Test for Digitalis:

1. **Baljet Test:** To a thick section of the leaf sodium picrate reagent is added. Yellow to orange colour indicates the presence of glycoside.
2. **Legal Test:** Glycoside is dissolved in pyridine and sodium nitroprusside solution is added to it and made alkaline. Pink to red colour is produced.
3. **Keller–Killiani Test:** The isolated glycoside is dissolved in glacial acetic acid and a drop of ferric chloride solution is added followed by the addition of sulphuric acid which forms the lower layer. A reddish-brown colour is seen in between two liquids and the upper layer becomes bluish green.