C H A P T E R IV

EVALUATION OF SAPONIN

As previously stated, froth number is determined according to Kofler (1936). Haemolytic index is determined according to Jaretzky (1936). The respective values for froth number and harmolytic indices are as follows:-

T A B L E - 20

Name of the plant	Plant part	Froth number	Haemolytic index	
			Uncorrected	Corrected to digitonin
1. Glinus lotoides Linn.	Root	200	500	780
	Stem	555	200	312
	Leaf	2500	-	-
	Fruit with seeds	1000	Partial	-
	Entire plant	1428	285	444.5
2. *Glinus oppositifolius Linn.	Stem & Leaves	1041	143	
3. Mollugo nudicaulis Lamk.	Entire plant	192	2857	4456
4. Mollugo cervianna (L.) Ser.	Entire plant	0(zero)	100	156

Evaluation of saponin

Name of the plant	Plant part	Froth number	Haemolytic index	
			Uncorrected	Corrected to digitonin
5* Gisekia pharnaceoides L.	Entire plant	125	250	
6* Primula denticulata Smith	Root	5000	66000	
	Leaf		2500	
7* Anagallis arvensis Linn.	Entire plant	333	5265	
8* Dodonaea viscosa Linn.	Leaf	333	0 (zero)	
	Root	666	4000	
9* Smilax china L.	Rhizome	50	0 (zero)	

* plants where the haemolytic indices are compared with those of senega root and Quillaia bark.

Froth number of Polygala senega root and Quillaia bark is 3000 (Fischer, 1952). The haemolytic indices for Polygala senega root and Quillaia bark are 2500-6000 and 4000-6000 respectively (Moritz, 1953).

D I S C U S S I O N

The amount of saponin can best be judged from

Evaluation of saponin

haemolytic index. Here, therefore, that method alone is relied upon for determining the quantity of saponin present. In a particular plant or its organ how much saponin is there, is denoted in the table in terms of haemolytic index value. It is to be deduced that the higher the value the more is the quantity of saponin.

Mollugo nudicaulis, M. cerviana, Gisekia pharnaceoides and Anagallis arvensis have respectively index values such as 2857, 100, 250 and 5265. In Anagallis arvensis, number is as high as 5265. This plant and the others mentioned here should not however be tried for saponin as they being very tiny, it would not be possible to obtain sufficient amount of raw material to work upon.

Among the residual plants, there is no saponin in the rhizome of Smilax china. In Dodonaea viscosa, the root shows appreciable amount of saponin while leaf has no saponin.

The best plants for this purpose to be recommended are Glinus lotoides, G. oppositifolius and Primula denticulata.

Here, all the parts of the plants contain not only saponin but also quite a high quantity. Among the species of Gliuns, G. lotoides is preferable to G. oppositifolius for the same reasons. G. lotoides grows wild all around Ahmedabad and is also found to grow througout

Evaluation of saponin

India. In Germany, roots of *Primula veris* and *P. elatior* are already in use as a substitute of senega (muzurek,1951). Thus, further phyto-chemical and clinical trials of the roots of *G. lotoides* and *P. denticulata* are essential. In the present study phytochemical study of roots of *G. lotoides* is also contemplated.