

from the verb kleben, to stick. "It is the presence of gluten in wheaten flour that imparts to it its viscosity or tenacity, and confers upon it its peculiar excellence for the manufacture of macaroni, vermicelli and similar pastes. The superiority of wheaten over other bread, depends upon the greater tenacity and elasticity of its dough and this is owing to the presence of the "gluten" we are speaking of. The dough during the fermentation and baking is puffed up by the evolved carbonic acid, and so stretched out as to produce the vesicular texture, so much valued in the light loaf."

This gluten is eminently nutritious, because it consists of albumenoids, which though insoluble in water, are easily acted on by the digesting fluids. It is not, however, a simple chemical compound but consists very largely of gluten fibrin. That it is highly nitrogenous may be proved by applying the same test as in the case of the white of egg.

The percentage composition of gluten fibrin I shall write down alongside of the other albumenoids, so that you may see how very little they vary from one another.

PERCENTAGE COMPOSITION.

		C.	H.	N.	S.	O &c.
Proteids (Vegetable)	{ Plant Albumen (from wheat)	53.10	7.20	17.60	1.60	20.50
	{ Legumin (peas)	51.50	7.00	16.80	0.40	24.30
	{ Gluten Fibrin (wheat)	54.30	7.20	16.90	1.00	20.00
Albumenoids (Animal)	{ Ovalbumen	52.5	6.9	15.25	1.93	23.42
	{ Casein	53.6	7.1	15.70	1.00	22.60
	{ Fibrin of blood	53.4	7.0	18.10	1.20	21.30

General Molecular Formula 72. 112. 18. 1. 22

We shall recognize more fully the great importance of these vegetable albumenoids, or proteids as I prefer to call them, when we come to consider later on those of the animal kingdom. Meanwhile what we have again to point out is that these bodies so complicated in their composition and so curious in their properties, are built up in the interior of plants from such inorganic materials as nitrogen, ammonia and nitric acid by the agency of no other apparatus than those tissues