

Properties of the Equilibrated Lenses:

Water Content:	89 wt. %
Light Transmission at 660 nm:	98%
Biological Stability:	No biodegradability observed.

Additional pertinent data are set forth in Table II infra.

EXAMPLE 3

The procedure of Example 2 supra is followed using the following materials.

Composition:	Parts
Atelocollagen	7.00
N-isopropylacrylamide	4.95
N,N'-methylenebisacrylamide	0.05
Distilled Water	88.00
	100

The equilibrated lenses exhibit the following properties:

Water Content:	91 wt. %
Light Transmission at 660 nm:	97%
Biological Stability:	No biodegradability observed.

Additional pertinent data are set forth in Table II infra.

EXAMPLE 4

The procedure of Example 2 supra is followed using the following materials:

Composition:	Parts
Atelocollagen	7.00
N-isopropylacrylamide	2.97

-continued  
observed.

5 Additional pertinent data are set forth in Table II infra.

EXAMPLE 5

10 The procedure of Example 2 supra is followed using the following materials:

Composition:	Parts
Atelocollagen	7.00
N-isopropylacrylamide	0.99
N,N'-methylenebisacrylamide	0.01
Distilled Water	92.00
	100

20 The equilibrated lenses exhibit the following properties:

Water Content:	93 wt. %
Light Transmission at 660 nm:	97%
Biological Stability:	Liquefied in two days

Additional pertinent data are set forth in Table II infra.

30 B. The procedure of Example 3 is repeated in four additional experiments employing, in lieu of N-isopropylacrylamide, an equal amount by weight of the following:

- (1) N,N-dimethylacrylamide, or
- (2) 50/50 (parts) mixture of N,N-dimethylacrylamide and 2-hydroxyethyl methacrylate, or
- (3) 50/50 (parts) mixture of N,N-dimethylacrylamide and N-isopropylacrylamide, or
- (4) dimethylaminoethyl methacrylate.

40 The resulting equilibrated lenses thus obtained exhibit substantially similar properties to those of Example 3.

TABLE II

Example	IPA/ATO Ratio <sup>(6)</sup>	PROPERTIES OF EQUILIBRATED LENSES					ENZYMATIC STABILITY <sup>(4)</sup>		
		% Water Content <sup>(1)</sup>	% LT <sup>(2)</sup>	Tear Strength $\text{gmm}^{-1}$		Biological Stability <sup>(3)</sup>	% Water Content	Tear Strength $\text{gmm}^{-1}$	
				Initial	Prorogated			Initial	Prorogated
2	50/50	89	98	2.4	1.4	No Liquefaction	93	1.1	1.0
3	42/58	91	97	2.1	1.4	No Liquefaction	94	1.2	1.1
4	30/70	92	97	2.0	1.0	No Liquefaction	96	0.8	0.7
5	12.5/87.5	93	97	1.2	1.1	Liquefaction; 2 days	96	— <sup>(5)</sup>	—
1	0/100	94	97	1.4	1.0	Liquefaction; 2 days	97	— <sup>(5)</sup>	—

(1) Water content after equilibration and leaching in preserved buffered saline solution.  
 (2) % LT (Light Transmission) is measured at 660 nm on samples of approximately 0.5 mm thickness.  
 (3) Biological stability is tested by immersion of the sample in dispersion of P.a. ATCC 14502 in phosphate buffer and nutrient media at about 10<sup>5</sup> microorganism per 1 ml. The temperature is 37° C. and duration of the test, 12 days. Liquefaction of a sample before the 12-period is recorded.  
 (4) Samples were kept in an aqueous solution of SOFLENS® enzymatic soft lens cleaner containing the enzyme papain overnight and retested.  
 (5) Samples could not be tested due to a general loss of integrity.  
 (6) Ratio of N-isopropylacrylamide/atelocollagen.

N,N'-methylenebisacrylamide	0.03
Distilled Water	90.00
	100

The equilibrated lenses exhibit the following properties:

Water Content:	92 wt. %
Light Transmission at 660 nm:	97%
Biological Stability:	No biodegradability

60 What is claimed is:  
 1. A polymerized hydrophilic water-swallowable, biologically stable composition made from a mixture of components consisting essentially of:

- (a) solubilized collagen; and
- (b) an ethylenically unsaturated monomer which is characterized by a polymerizable carbon-to-carbon double bond and is composed of atoms of the group consisting of