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sharp cut-off of absorption in the 400 to 420 nm region (there was 5% transmission at 403 nm and 70% at 420 nm).

Example 4

A sheet, 2.95 mm thick, was made having 100 parts by weight of PMMA and 10 parts by weight of DHP. The sheet absorbed more than 95% of ultraviolet light in the 300-400 nm region and had a sharp cut-off of absorption in about the 405 to 430 nm range (there was less than 5% transmission at 405 nm and about 90% transmission at 430 nm).

Example 5

A sheet, $\frac{1}{8}$ inch thick, was made having 100 parts by weight of PMMA and 10 parts by weight of HMP. This sheet absorbed over 95% of the ultraviolet light between 300 and 400 nm with a sharp cut-off of absorption at about 400 nm (there was about 5% transmission at 400 and over 90% transmission at about 425 nm).

Example 6

The PMMA containing HMP material used in Example 5 was used in this example. Four samples of the material were extracted in four (4) different media for one (1) hour at 121° C.

1. Sodium chloride
2. Ethanol in sodium chloride
3. Polyethylene glycol
4. Cottonseed oil

Two rabbits were used for each extract. Exactly 0.2 ml of test material extract was injected intracutaneously in ten (10) sites on the right side of each animal and ten (10) injections of 0.2 ml of extracting medium were placed into the left side of each animal. The degree of erythema and edema of the two sides were compared 1, 2 and 3 days after the injection to determine the degree of tissue reaction.

There were no significant signs of erythema nor edema due to the intracutaneous injection of extraction of the PMMA material as compared to injections of the extraction mediums. Therefore, an extract of PMMA material does not result in erythema or edema 72 hours after intracutaneous injection. This test demonstrates the non-toxic and nonleachable properties of the ultraviolet light absorbing additive.

Example 7

Four (4) grams of material having the same composition as used in Example 6 were cut into 11 pieces approximately 1.016 cm square and 0.3 cm thick (37.07 cm² total surface area for each 4 grams). The materials were cleaned and sterilized. The 4 grams were then incubated at 90° C. in 20 ml of saline (1 gr for each 5 ml of saline or 1 cm² surface area for each 0.55 ml of saline).

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After 1.5 weeks of 90° C., the material was removed and the ultraviolet absorbance of the extract measured. The concentration of the absorber in the extract was determined from the absorbance.

The absorbance of pure saline subtracted from the absorbance of the extract of the ultraviolet absorbing PMMA, was always less than 0.004 between wavelengths of 300 and 400 nm. Since the ultraviolet absorber strongly absorbs ultraviolet radiation and is stable above 140° C., it would have been detected by this method. Therefore, there was no significant leaching of ultraviolet absorber, since there was negligible absorbance of the ultraviolet filtering PMMA extract.

Example 8

Intraocular implants of PMMA containing 0.1 weight percent of HMP were implanted in the anterior chamber of rabbits. No toxic or adverse behavior was observed after one year. There was also one explanted lens which showed no change in ultraviolet light absorbing properties.

We claim:

1. An intraocular lens for implantation into a human eye to replace the natural lens, said intraocular lens being adapted to provide absorption of ultraviolet light and transmission of visible light which mimics said natural lens, said intraocular lens comprising an optic lens which consists essentially of an optical quality solid thermoplastic polymer having a specific gravity of less than about 1.7, said polymer having uniformly distributed therein an ultraviolet absorber selected from the group of benzotriazoles consisting of 2-(3',5'-ditertiary butyl-2'-hydroxy phenyl-5-chlorobenzotriazole and 2-(2'-hydroxy-5'-methyl-phenyl)benzotriazole said ultraviolet absorber being present in said optic lens in an amount sufficient to absorb at least 90 percent of said ultraviolet light in the 300 to 380 nm range while transmitting substantially all of said visible light.

2. An intraocular lens according to claim 1 wherein said thermoplastic polymer is selected from the group consisting of polymethylmethacrylate and copolymers thereof, aromatic polycarbonate, aromatic polysulfone and aromatic polyetherimide.

3. An intraocular lens according to claim 2 wherein said thermoplastic polymer is polymethylmethacrylate.

4. An intraocular lens according to claim 3 wherein said ultraviolet absorber is 2-(3', 5'-ditertiary butyl-2'-hydroxy phenyl) benzotriazole.

5. An intraocular lens according to claim 3 wherein said ultraviolet absorber is 2-(2'-hydroxy-5'-methyl phenyl) benzotriazole.

6. An intraocular lens according to claim 3 wherein said ultraviolet absorber is 2-(3'-tertiary-butyl-5'-methyl-2'-hydroxy phenyl)-5-chlorobenzo-triazole.

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