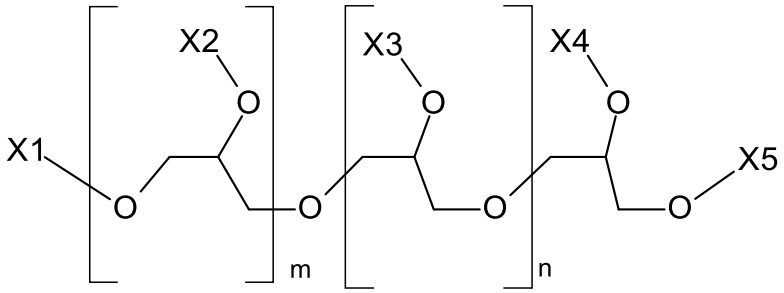
Use of an ultraviolet radiation absorbing composition as a light stabilizer for a shaped artificial polymer article.

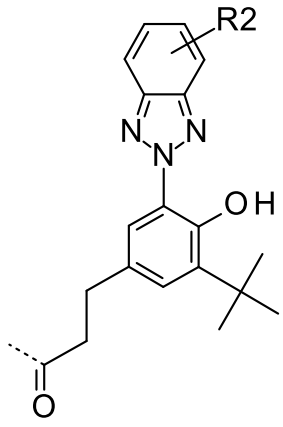
The present disclosure relates to the use of an ultraviolet radiation absorbing composition as a light stabilizer for a shaped artificial polymer article, the stabilized shaped artificial polymer article and an extruded, molded or calendered polymer composition containing the ultraviolet radiation absorbing composition.

In an aspect, there is provided the use of an ultraviolet radiation absorbing composition as a light stabilizer for a shaped artificial polymer article, wherein the polymer is a synthetic polymer and/or a natural elastomer and wherein the ultraviolet radiation absorbing composition comprises the compound of the general formula (I)



(I)

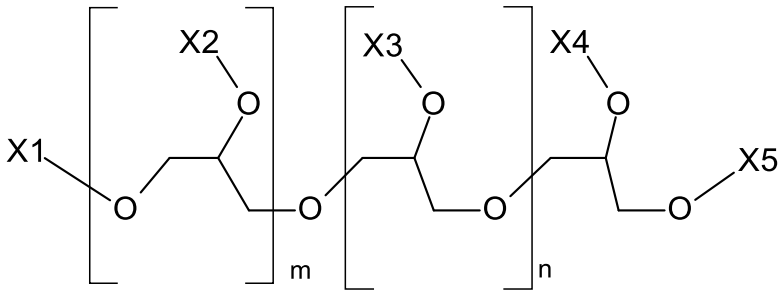
wherein n and m, independently from each other, are a number from 0 to 20, and at least one of m and n is ≥ 1; and X1, X2, X3, X4 and X5 are the same or different and are independently selected from H, C(O)R1 with R1 being C_8-C_{24}-alkyl, or a group of the general formula (II)



(II)

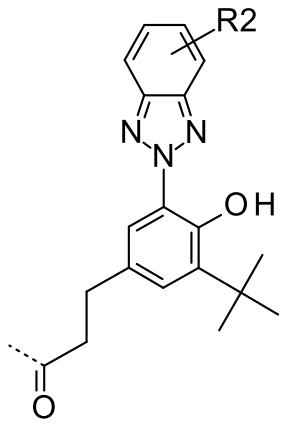
with R2 being H or halogen.

In another aspect, there is provided a shaped artificial polymer article wherein the polymer is a synthetic polymer and/or a natural elastomer and wherein the polymer contains an ultraviolet radiation absorbing composition which comprises the compound of the general formula (I)



(I)

wherein n and m, independently from each other, are a number from 0 to 20, and at least one of m and n is ≥ 1; and X1, X2, X3, X4 and X5 are the same or different and are independently selected from H, C(O)R1 with R1 being C_8-C_{24}-alkyl, or a group of the general formula (II)



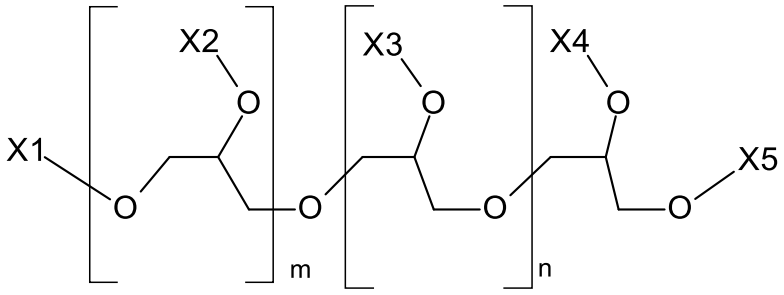
(II)

with R2 being H or halogen.

In another aspect, there is provided an extruded, molded or calendered polymer composition comprising

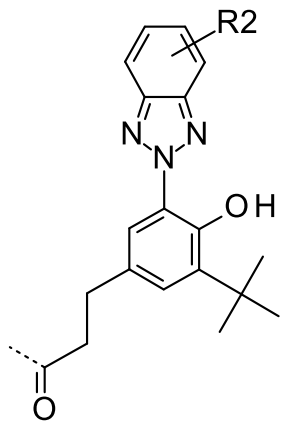
(1) a synthetic polymer and/or a natural elastomer, and

(2) an ultraviolet radiation absorbing composition which comprises the compound of the general formula (I)



(I)

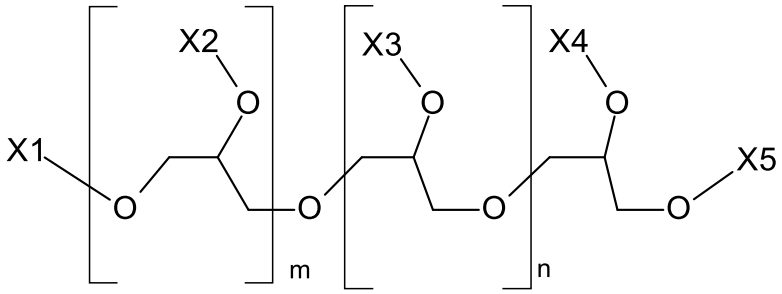
wherein n and m, independently from each other, are a number from 0 to 20, and at least one of m and n is ≥ 1; and X1, X2, X3, X4 and X5 are the same or different and are independently selected from H, C(O)R1 with R1 being C_8-C_{24}-alkyl, or a group of the general formula (II)



(II)

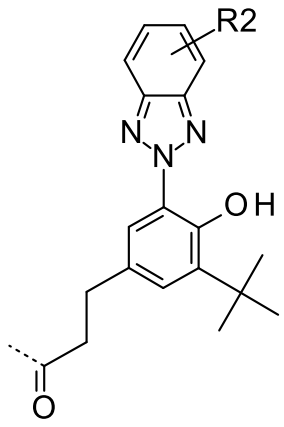
with R2 being H or halogen.

The present invention relates in particular to the use of an ultraviolet radiation absorbing composition (an additive composition) as a light stabilizer for a shaped artificial (or industrial) polymer article, wherein the polymer is a synthetic polymer and/or a natural elastomer and wherein the ultraviolet radiation absorbing composition comprises the compound of the general formula (I)



(I)

wherein n and m, independently from each other, are a number from 0 to 20, and at least one of m and n is ≥ 1; and X1, X2, X3, X4 and X5 are the same or different and are independently selected from H, C(O)R1 with R1 being C_8-C_{24}-alkyl, or a group of the general formula (II)



(II)

with R2 being H or halogen.

It is preferred that in the compound of the general formula (I), n and m, independently from each other, are a number from 0 to 20, and at least one of m and n is ≥ 1; and X1, X2, X3, X4 and X5 are the same or different and are independently selected from H, C(O)R1 with R1 being C_8-C_{24}-alkyl, or a group of the general formula (II)