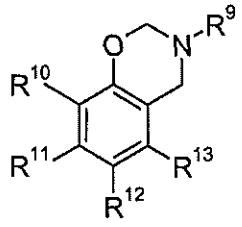
THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A synergistic mixture comprising:

as **component (A)** from 1 to 99.9% by weight of:

(i) at least one of tetrahydrobenzoxazine of the general formula IV



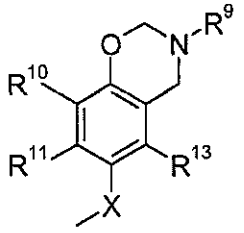
(IV)

in which the substituent R^9 is a hydrocarbyl radical which has from 1 to 3000 carbon atoms and may be interrupted by one or more heteroatoms from the group of O and S and/or by one or more NR^{14} moieties,

where R^{14} is a hydrogen atom or a C_1- to C_4-alkyl radical, and

the substituents R^{10}, R^{11}, R^{12} and R^{13} are each independently hydrogen atoms, hydroxyl groups or hydrocarbyl radicals which have in each case from 1 to 3000 carbon atoms and may be interrupted by one or more heteroatoms from the group of O and S and/or by one or more NR^{14} moieties, where R^{14} is as defined above,

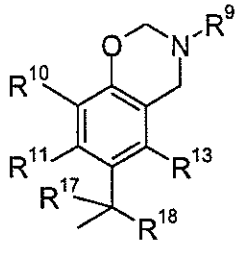
where the substituent R^{12} may also be a radical of the formula Y

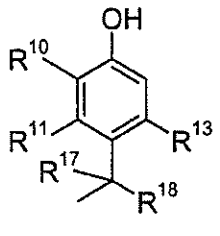


(Y)

in which the substituents R^9, R^{10}, R^{11} and R^{13} are each as defined above and substituent X is a hydrocarbon bridging member which consists of one or more isobutene units or comprises one or more isobutene units, or

where the substituent R^{12} may also be a radical of the formula Z or Z'


(Z)


(Z')

in which the substituents R^9, R^{10}, R^{11} and R^{13} are each as defined above and the substituents R^{17} and R^{18} may be the same or different and are each hydrogen or a C_1- to C_{10}-alkyl radical,

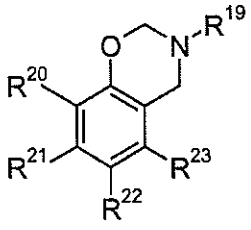
and in which the substituents R^{10} and R^{11} or R^{11} and R^{12} or R^{12} and R^{13} may also form a second tetrahydrooxazine ring with the -O-CH_2-NR^{15}-CH_2- substructure attached to the benzene ring, or the substituents R^{10} and R^{11} and R^{12} and R^{13} may also form a second and a third tetrahydrooxazine ring with the -O-CH_2-NR^{15}-CH_2- and -O-CH_2-NR^{16}-CH_2- substructures attached to the benzene ring,

where R^{15} and R^{16} are each independently hydrocarbyl radicals which have in each case from 1 to 3000 carbon atoms and may be interrupted by one or more heteroatoms from the group of O and S and/or by one or more NR^{14} moieties,

with the proviso that at least one of the substituents R^9, R^{10}, R^{11}, R^{12}, R^{13}, R^{15} or R^{16} has from 4 to 3000 carbon atoms and the remaining substituents from the group of R^9, R^{10}, R^{11}, R^{12}, R^{13}, R^{15} and R^{16}, when they are hydrocarbyl radicals, each have from 1 to 20 carbon atoms, or

(ii) at least one polycyclic phenolic compound which has up to 20 benzene rings per molecule and is obtainable by:

reacting a tetrahydrobenzoxazine of the general formula XXVI


(XXVI)

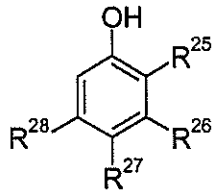
in which the substituent R^{19} is a hydrocarbyl radical which has from 1 to 3000 carbon atoms and may be interrupted by one or more heteroatoms from the group of O and S and/or by one or more NR^{24} moieties,

where R^{24} is a hydrogen atom or a C_1- to C_4-alkyl radical, and

in which the substituents R^{20}, R^{21}, R^{22} and R^{23} are each independently hydrogen atoms, hydroxyl groups or hydrocarbyl radicals which have in each case from 1 to 3000 carbon atoms and may be interrupted by one or more heteroatoms from the group of O and S and/or by one or more NR^{24} moieties where R^{24} is as defined above

with at least one of:

(iia) at least one of the same or different phenols of the general formula XXVII

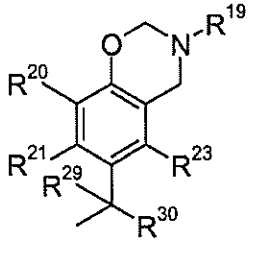


(XXVII)

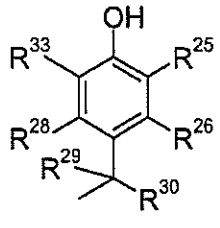
in which the substituents R^{25}, R^{26}, R^{27} and R^{28} are each independently hydrogen atoms, hydroxyl groups or hydrocarbyl radicals which have in each case from 1 to 3000 carbon atoms and may be interrupted by one or more heteroatoms from the group of O and S and/or by one or more NR^{24} moieties where R^{24} is as defined above, or

(iib) at least one of the same or different tetrahydrobenzoxazines of the general formula XXVI,

where the substituent R^{22} may also be a radical of the formula Z" and the substituent R^{27} may also be a radical of the formula Z"'



(Z")



(Z"')

in which the substituents R^{19}, R^{20}, R^{21}, R^{23}, R^{25}, R^{26} and R^{28} are each as defined above, the substituent R^{25} may also be a radical derived from a tetrahydrobenzoxazine of the general formula XXVI, the substituent R^{33} in hydrogen or a radical derived from a tetrahydrobenzoxazine of the general formula XXVI, and the substituents R^{29} and R^{30} may be the same or different and are each hydrogen or a C_1- to C_{10}-alkyl radical,

and in which the substituents R^{20} and R^{21} or R^{21} and R^{22} or R^{22} and R^{23} may also form a second tetrahydrooxazine ring with the -O-CH_2-NR^{31}-CH_2- substructure attached to the benzene ring, or the substituents R^{20} and R^{21} and R^{22} and R^{23} may also form a second and a third tetrahydrooxazine ring with the -O-CH_2-NR^{31}-CH_2- and -O-CH_2-NR^{32}-CH_2- substructures attached to the benzene ring, where R^{31} and R^{32} are each independently hydrocarbyl radicals which have in each case from 1 to 3000 carbon atoms and may be interrupted by one or more heteroatoms from the group of O and S and/or by one or more NR^{24} moieties where R^{24} is as defined above,

with the proviso that at least one of the substituents R^{19}, R^{20}, R^{21}, R^{22}, R^{23}, R^{25}, R^{26}, R^{27}, R^{28}, R^{31} or R^{32} has from 13 to 3000 carbon atoms and the remaining substituents from the group of R^{19}, R^{20}, R^{21}, R^{22}, R^{23}, R^{25}, R^{26}, R^{27}, R^{28}, R^{31} or R^{32}, when they are hydrocarbyl radicals, have in each case from 1 to 20 carbon atoms; and

as component (B)

from 0.1 to 99% by weight of at least one sulfur-containing organic compound with antioxidant action,

where the sum of the two components (A) and (B) adds up to 100% by weight.

2. The synergistic mixture according to claim 1, comprising, as component (B), at least one organic compound having at least one -$(S)_x$- moiety in which x is an integer from 1 to 20.

3. The use of the synergistic mixture according to claim 1, as a stabiliser for stabilising inanimate organic material against the action of light, oxygen and heat.

4. The use of the synergistic mixture according to any one of claims 1 to 3, as a stabiliser in mineral oil products and fuels.

5. The use of the synergistic mixture according to claim 1 or claim 2, as a stabiliser in turbine fuels (jet fuels).

6. The use of the synergistic mixture according to claim 5, as a stabiliser for improving the thermal stability of turbine fuels.

7. The use of the synergistic mixture according to claim 5, as a stabiliser in turbine fuels for reducing deposits in at least one of the fuel system or combustion system of turbines.

8. Inanimate organic material comprising at least one synergistic mixture according to claim 1.

9. A fuel composition comprising a fuel and at least one synergistic mixture according to claim 1.

10. A turbine fuel composition comprising a turbine fuel and at least one synergistic mixture according to claim 1.

11. An additive concentrate for turbine fuel, comprising at least one synergistic mixture according to claim 1, and if appropriate at least one diluent and if appropriate at least one additive.

12. The use of a synergistic mixture according to claim 1, as a stabiliser for improving at least one of the oxidation and ageing stability, or the shear stability, of lubricant compositions.

13. A lubricant composition comprising the components customary therefor and at least one synergistic mixture according to claim 1.