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(54) **Titre : AGENT DE LUTTE CONTRE LA DERIVE COMPRENANT DU POLYPROPYLENEGLYCOL ET UN POLYMERE
TRISEQUENCE**

(54) **Title: DRIFT CONTROL AGENT COMPRISING POLYPROPYLENE GLYCOL AND A TRIBLOCK POLYMER**

(57) **Abrégé/Abstract:**

The present invention relates to a method for preparing a tank mix, which comprises the step of contacting a pesticide for-mulation, water, and a tank mix adjuvant which comprises a polypro- pylene glycol and a triblock polymer comprising at least one polyethyleneoxide moiety and at least one polypro-pyleneoxide moiety; to the tank mix adjuvant; to a pesticide formulation comprising the tank mix adjuvant: to a method of controlling phytopathogenic fungi and/or undesired vegetation and/or undesired insect or mite attack and/or for regulating the growth of plants, wherein the tank mix is allowed to act on the respective pests, their environment or the plants to be protected from the respective pest, on the soil and/or on undesired plants and/or the crop plants and/or their environment, and to a use of the tank mix adjuvant or reducing the wind drift of a pesticide formulation.



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(54) Title: DRIFT CONTROL AGENT COMPRISING POLYPROPYLENE GLYCOL AND A TRIBLOCK POLYMER

(57) Abstract: The present invention relates to a method for preparing a tank mix, which comprises the step of contacting a pesticide for-mulation, water, and a tank mix adjuvant which comprises a polypro- pylene glycol and a triblock polymer comprising at least one polyethyleneoxide moiety and at least one polypro-pyleneoxide moiety; to the tank mix adjuvant; to a pesticide formulation comprising the tank mix adjuvant: to a method of controlling phytopathogenic fungi and/or undesired vegetation and/or undesired insect or mite attack and/or for regulating the growth of plants, wherein the tank mix is allowed to act on the respective pests, their environment or the plants to be protected from the respective pest, on the soil and/or on undesired plants and/or the crop plants and/or their environment, and to a use of the tank mix adjuvant or reducing the wind drift of a pesticide formulation.



WO 2014/009175 A1

Drift control agent comprising polypropylene glycol and a triblock polymer

The present invention relates to a method for preparing a tank mix, which comprises the step of contacting a pesticide for-mulation, water, and a tank mix adjuvant which comprises a polypropylene glycol and a triblock polymer comprising at least one polyethyleneoxide moiety and at least one polypropyleneoxide moiety; to the tank mix adjuvant; to a pesticide formulation comprising the tank mix adjuvant; to a method of controlling phytopathogenic fungi and/or undesired vegetation and/or undesired insect or mite attack and/or for regulating the growth of plants, wherein the tank mix is allowed to act on the respective pests, their environment or the plants to be protected from the respective pest, on the soil and/or on undesired plants and/or the crop plants and/or their environment, and to a use of the tank mix adjuvant or reducing the wind drift of a pesticide formulation. The preferred embodiments of the invention mentioned herein below have to be understood as being preferred either independently from each other or in combination with one another.

The reduction wind drift is an important object in agrochemistry. Various drift control agents are known showing a wide variety of different chemical compositions. Thus, it is very difficult to identify new drift control agents or optimizing structures of known drift control agents.

Dicamba is an important herbicide, which requires high drift control to avoid damages in neighboring fields.

WO 02/067682 discloses a herbicidal aqueous emulsion comprising as organic phase a solution of a herbicide in a hydrophobic solvent and a oil phase stabiliser (e.g. polypropylene glycols) and as aqueous phase a solution of a pH buffer and a surfactant or dispersant (e.g. EO/PO/EO block copolymers).

Object of the present invention was to find a new drift control agent with improved properties. These agents should be easily to prepare starting from cheap, industrially available compounds, which are easy to handle.

The object was solved by a method for preparing a tank mix, which comprises the step of contacting a pesticide formulation, water, and a tank mix adjuvant which comprises a polypropylene glycol and a triblock polymer comprising at least one polyethyleneoxide moiety and at least one polypropyleneoxide moiety. The object was also solved by a tank mix adjuvant which comprises a polypropylene glycol and a triblock polymer comprising at least one polyethyleneoxide moiety and at least one polypropyleneoxide moiety.

Suitable **polypropylene glycols** are well known polymers, which are commercially available. Polypropylene glycols may be prepared by polyaddition of propylene oxide and a difunctional alcohol, such as propane diol. Polypropylene glycols may be described by the general formula $\text{HO}(\text{CH}(\text{CH}_3)\text{-CH}_2\text{O})_n\text{H}$, wherein n may denote the degree of polymerization and thus determines the molecular weight.

The polypropylene glycol may have an average **molecular weight** of at least 200 g/mol, preferably at least 400 g/mol. The polypropylene glycol may have an average molecular weight of up to 10 000 g/mol, preferably up to 5000 g/mol. In another form, the polypropylene glycol may have
 5 an average molecular weight of 200 to 10 000 g/mol, preferably of 1000 to 7000 g/mol, and in particular from 2500 to 6500 g/mol. The molecular weight may be determined based on the hydroxy number.

The polypropylene glycol may have a **solidification temperature** of below -10 °C, preferably below -20 °C, and in particular below -25 °C. The polypropylene glycol may have a solidification
 10 temperature of above -60 °C.

The **triblock polymer** may preferably comprise one polyethyleneoxide moiety and two polypropyleneoxide moieties, or two polyethyleneoxide moieties and one polypropyleneoxide moiety.
 15 More preferably, the triblock polymer is a polyethyleneoxide polypropyleneoxide polyethyleneoxide (EO-PO-EO) or a polypropyleneoxide polyethyleneoxide polypropyleneoxide (PO-EO-PO) triblock polymer.

The (EO-PO-EO) triblock polymer may be described by the general formula
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$$\text{HO}(\text{CH}_2\text{-CH}_2\text{O})_x\text{-}(\text{CH}(\text{CH}_3)\text{-CH}_2\text{O})_y\text{-}(\text{CH}_2\text{-CH}_2\text{O})_z\text{H}$$
 wherein x, y and z may denote the degree of polymerization and thus determine the molecular weight.

The (PO-EO-PO) triblock polymer may be described by the general formula
 25
$$\text{HO}(\text{CH}(\text{CH}_3)\text{-CH}_2\text{O})_x\text{-}(\text{CH}_2\text{-CH}_2\text{O})_y\text{-CH}(\text{CH}_3)\text{-CH}_2\text{O})_z\text{H}$$
 wherein x, y and z may denote the degree of polymerization and thus determine the molecular weight.

The triblock polymer may have an average **molecular weight** of at least 500 g/mol, preferably at least 1000 g/mol. The triblock polymer may have an average molecular weight of up to 10 000 g/mol, preferably up to 6000 g/mol. In another form, the triblock polymer may have an average
 30 molecular weight of 500 to 10 000 g/mol, preferably of 800 to 6000 g/mol, and in particular from 1500 to 5000 g/mol. The molecular weight may be determined based on the hydroxy number.

The triblock polymer may have a **surface tension** of 30 to 45 mN/m, preferably of 32 to 43 mN/m, and in particular of 33 to 40 mN/m, at a concentration of 1 g/l in water at 23 °C.
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In a particular preferred form the triblock polymer is a polyethyleneoxide polypropyleneoxide polyethyleneoxide (EO-PO-EO) triblock polymer. The polypropyleneoxide moiety in the EO-PO-
 40 EO triblock polymer may have a molar mass of 800 to 8000 g/mol, preferably from 1200 to 5000 g/mol, and in particular from 1500 to 4000 g/mol. The EO-PO-EO triblock polymer may contain

3 to 80 mol%, preferably 5 to 50 mol%, and in particular 5 to 20 mol% of the polyethyleneoxide moiety.

5 The PO-EO-PO triblock polymer may contain 3 to 80 mol%, preferably 5 to 50 mol%, and in particular 5 to 20 mol% of the polyethyleneoxide moieties.

10 The **weight ratio** of the triblock polymer (e.g. the (EO-PO-EO) triblock polymer or the (PO-EO-PO) triblock polymer) to the polypropylene glycol is usually from 50 : 50 to 95 : 5, preferably from 60 : 40 to 96 : 4, more preferably from 70 : 30 to 93 : 7, and in particular from 75 : 25 to 92 : 8. In preferred form the weight ratio of the (EO-PO-EO) triblock polymer or the (PO-EO-PO) triblock polymer (e.g. each with a molecular weight of 800 to 6000 g/mol) to the polypropylene glycol (e.g. with a molecular weight of 2500 to 6500 g/mol) is usually from 50 : 50 to 95 : 5, preferably from 60 : 40 to 96 : 4, more preferably from 70 : 30 to 93 : 7, and in particular from 75 : 25 to 92 : 8.

15 In another preferred form the weight ratio of the (EO-PO-EO) triblock polymer or the (PO-EO-PO) triblock polymer (e.g. each with a molecular weight of 800 to 6000 g/mol) to the polypropylene glycol (e.g. with a molecular weight of 2500 to 6500 g/mol) is usually from 90 : 10 to 10 : 90, preferably from 70 : 30 to 15 : 85, more preferably from 50 : 50 to 20 : 80, and in particular from 60 : 40 to 25 : 75.

20 The tank mix or the pesticide formulation may comprise at least one liquid phase, wherein the triblock polymer (e.g. the (EO-PO-EO) triblock polymer or the (PO-EO-PO) triblock polymer) and the polypropylene glycol are present in the same phase (preferably in an aqueous phase).

25 The **tank mix** contains typically from 0,005 to 2,0 wt%, preferably from 0,01 to 1,0 wt%, and in particular from 0,05 to 0,3 wt% of the tank mix adjuvant. In a preferred form the tank mix contains from 0,01 to 1,0 wt% of the tank mix adjuvant, which comprises in a weight ratio of the (EO-PO-EO) triblock polymer or the (PO-EO-PO) triblock polymer (e.g. each with a molecular weight of 800 to 6000 g/mol) to the polypropylene glycol (e.g. with a molecular weight of 2500 to 6500 g/mol) from 50 : 50 to 95 : 5. In another preferred form the tank mix contains from 0,01 to 1,0 wt% of the tank mix adjuvant, which comprises in a weight ratio of the (EO-PO-EO) triblock polymer or the (PO-EO-PO) triblock polymer (e.g. each with a molecular weight of 800 to 6000 g/mol) to the polypropylene glycol (e.g. with a molecular weight of 2500 to 6500 g/mol) from 50 : 90 : 10 to 10 : 90.

35 The step of contacting of the pesticide formulation, water, and the tank mix adjuvant may be achieved by mixing the components in any sequence. The contacting may take place in a tank, in which the tank mix is prepared, by pouring the pesticide formulation, water, and the tank mix adjuvant into the tank, optionally followed by stirring. Preferably, the contacting is done at ambient temperature, such as from 5 to 45 °C.

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The weight ratio of pesticide formulation to water is usually in a range of from 1:1 to 1:10000, more preferably from 1:5 to 5000, and in particular from 1:10 to 1:1000.

5 The tank mix is usually an aqueous liquid, which is ready to be applied (e.g. by spraying) in the method of controlling phytopathogenic fungi and/or undesired vegetation and/or undesired insect or mite attack and/or for regulating the growth of plants.

Typically, the tank mix contains at least 50 wt% water, preferably at least 65 wt%, more preferably at least 80 wt% and in particular at least 90 wt%.

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The water is preferably untreated natural water, such as ground water, rain water collected in a water reservoir, river water, or lake water. For comparison, treated water relates to tap water, which has passed a sewage plant.

15 The method for preparing the tank mix may comprises the step of contacting a pesticide formulation, water, a tank mix adjuvant, and optionally an **auxiliary**. The pesticide formulation may also comprise an auxiliary, which may be different or identical to the auxiliary to be added to the tank mix. Examples for auxiliaries are solvents, liquid carriers, solid carriers or fillers, surfac-

20 tive colloids, adhesion agents, thickeners, humectants, repellents, attractants, feeding stimulants, compatibilizers, bactericides, anti-freezing agents, anti-foaming agents, colorants, tackifiers and binders.

Suitable **solvents** and liquid carriers are water and organic solvents, such as mineral oil frac-

25 tions of medium to high boiling point, e.g. kerosene, diesel oil; oils of vegetable or animal origin; aliphatic, cyclic and aromatic hydrocarbons, e. g. toluene, paraffin, tetrahydronaphthalene, alkylated naphthalenes; alcohols, e.g. ethanol, propanol, butanol, benzylalcohol, cyclohexanol; glycols; DMSO; ketones, e.g. cyclohexanone; esters, e.g. lactates, carbonates, fatty acid esters, gamma-butyrolactone; fatty acids; phosphonates; amines; amides, e.g. N-methylpyrrolidone,

30 fatty acid dimethylamides; and mixtures thereof. Preferred solvents are organic solvents.

Suitable **solid carriers** or fillers are mineral earths, e.g. silicates, silica gels, talc, kaolins, limestone, lime, chalk, clays, dolomite, diatomaceous earth, bentonite, calcium sulfate, magnesium sulfate, magnesium oxide; polysaccharide powders, e.g. cellulose, starch; fertilizers, e.g. ammonium sulfate, ammonium nitrate, ureas; products of vegetable origin, e.g. cereal meal, tree

35 bark meal, wood meal, nutshell meal, and mixtures thereof.

Suitable **surfactants** are surface-active compounds, such as anionic, cationic, nonionic and amphoteric surfactants, block polymers, polyelectrolytes, and mixtures thereof. Such surfactants

40 can be used as emusifier, dispersant, solubilizer, wetter, penetration enhancer, protective colloid, or adjuvant. Examples of surfactants are listed in McCutcheon's, Vol.1: Emulsifiers & De-

tergents, McCutcheon's Directories, Glen Rock, USA, 2008 (International Ed. or North American Ed.).

Suitable **anionic** surfactants are alkali, alkaline earth or ammonium salts of sulfonates, sulfates, phosphates, carboxylates, and mixtures thereof. Examples of sulfonates are alkylarylsulfonates, diphenylsulfonates, alpha-olefin sulfonates, lignine sulfonates, sulfonates of fatty acids and oils, sulfonates of ethoxylated alkylphenols, sulfonates of alkoxyated arylphenols, sulfonates of condensed naphthalenes, sulfonates of dodecyl- and tridecylbenzenes, sulfonates of naphthalenes and alkylnaphthalenes, sulfosuccinates or sulfosuccinamates. Examples of sulfates are sulfates of fatty acids and oils, of ethoxylated alkylphenols, of alcohols, of ethoxylated alcohols, or of fatty acid esters. Examples of phosphates are phosphate esters. Examples of carboxylates are alkyl carboxylates, and carboxylated alcohol or alkylphenol ethoxylates.

Suitable **nonionic** surfactants are alkoxyates, N-substituted fatty acid amides, amine oxides, esters, sugar-based surfactants, polymeric surfactants, and mixtures thereof. Examples of alkoxyates are compounds such as alcohols, alkylphenols, amines, amides, arylphenols, fatty acids or fatty acid esters which have been alkoxyated with 1 to 50 equivalents. Ethylene oxide and/or propylene oxide may be employed for the alkoxylation, preferably ethylene oxide. Examples of N-substituted fatty acid amides are fatty acid glucamides or fatty acid alkanolamides. Examples of esters are fatty acid esters, glycerol esters or monoglycerides. Examples of sugar-based surfactants are sorbitans, ethoxylated sorbitans, sucrose and glucose esters. Examples of polymeric surfactants are homo- or copolymers of vinylpyrrolidone, vinylalcohols, or vinylacetate. Preferred nonionic surfactants are alkylpolyglucosides and alkoxyates (e.g. alkylamines, which have been alkoxyated). Preferred alkoxyates are linear or branched C₈-C₁₄ alkylamines, which have been ethoxylated. Typically, the tank mix adjuvant contains at least 10 g/l, preferably at least 50 g/l, and in particular at least 100 g/l of the non-ionic surfactants. Typically, the tank mix adjuvant contains up to 600 g/l, preferably up to 500 g/l, and in particular up to 400 g/l of the non-ionic surfactants. Alkylpolyglycosides are not considered nonionic surfactants within the meaning of this invention.

Suitable **cationic** surfactants are quaternary surfactants, for example quaternary ammonium compounds with one or two hydrophobic groups, or salts of long-chain primary amines. Suitable **amphoteric** surfactants are alkylbetains and imidazolines. Suitable **polyelectrolytes** are polyacids or polybases. Examples of polyacids are alkali salts of polyacrylic acid or polyacid comb polymers. Examples of polybases are polyvinylamines or polyethyleneamines.

Suitable **adjuvants** are compounds, which have a neglectable or even no pesticidal activity themselves, and which improve the biological performance of the pesticide on the target. Examples are surfactants, mineral or vegetable oils, and other auxiliaries. Further examples are listed by Knowles, Adjuvants and additives, Agrow Reports DS256, T&F Informa UK, 2006, chapter 5.

Suitable **thickeners** are polysaccharides (e.g. xanthan gum, carboxymethylcellulose), anorganic clays (organically modified or unmodified), polycarboxylates, and silicates.

5 Suitable **bactericides** are bronopol and isothiazolinone derivatives such as alkylisothiazolinones and benzisothiazolinones.

Suitable **anti-freezing agents** are ethylene glycol, propylene glycol, urea and glycerin.

10 Suitable **anti-foaming agents** are silicones, long chain alcohols, and salts of fatty acids. Preferred anti-foaming agents are silicones, such as polydimethylsiloxan.

15 Suitable **colorants** (e.g. in red, blue, or green) are pigments of low water solubility and water-soluble dyes. Examples are inorganic colorants (e.g. iron oxide, titan oxide, iron hexacyanoferrate) and organic colorants (e.g. alizarin-, azo- and phthalocyanine colorants).

Suitable **tackifiers or binders** are polyvinylpyrrolidons, polyvinylacetates, polyvinyl alcohols, polyacrylates, biological or synthetic waxes, and cellulose ethers.

20 The present invention also relates to a **pesticide formulation** comprising the tank mix adjuvant.

The pesticide formulation contains typically from 0,1 to 45 wt%, preferably from 1 to 35 wt%, and in particular 3 to 25 wt% of the tank mix adjuvant. In a preferred form the pesticide formulation contains from 1 to 35 wt% of the tank mix adjuvant, which comprises in a weight ratio of the (EO-PO-EO) triblock polymer or the (PO-EO-PO) triblock polymer (e.g. each with a molecular weight of 800 to 6000 g/mol) to the polypropylene glycol (e.g. with a molecular weight of 2500 to 6500 g/mol) from 50 : 50 to 95 : 5. In another preferred form the pesticide formulation contains from 1 to 35 wt% of the tank mix adjuvant, which comprises in a weight ratio of the (EO-PO-EO) triblock polymer or the (PO-EO-PO) triblock polymer (e.g. each with a molecular weight of 800 to 6000 g/mol) to the polypropylene glycol (e.g. with a molecular weight of 2500 to 6500 g/mol) from 90 : 10 to 10 : 90. Usually, the amount of tank mix adjuvant in the pesticide formulation refers to the sum of the amounts of the polypropylene glycol and of the triblock polymer.

35 Pesticide formulations are generally known and commercially available. Pesticide formulations usually comprise a pesticide and an auxiliary. Pesticide formulations may be any type of agrochemical formulation, such as solid or liquid formulations. Examples for composition types are suspensions (e.g. SC, OD, FS), emulsifiable concentrates (e.g. EC), emulsions (e.g. EW, EO, ES, ME), capsules (e.g. CS, ZC), pastes, pastilles, wettable powders or dusts (e.g. WP, SP, WS, DP, DS), pressings (e.g. BR, TB, DT), granules (e.g. WG, SG, GR, FG, GG, MG), solutions (e.g. SL). Further examples for compositions types are listed in the "Catalogue of pesticide formulation types and international coding system", Technical Monograph No 2, 6th Ed. May 2008, CropLife International. Preferably, the pesticide formulation is an aqueous liquid formulation,

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such as an SL formulation. In another preferred form the pesticide formulation is a suspension, such as an SC formulation.

The pesticide formulation may contain at least 10 wt%, preferably at least 20 wt%, and in particular at least 30 wt% of the pesticide.

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The pesticide is preferably present in dissolved or suspended form in the pesticide formulation. In a more preferred form the pesticide is a water-soluble pesticide and is dissolved in the aqueous phase of the pesticide formulation (e.g. a SL formulation). In another more preferred form the pesticide is a water-insoluble pesticide and is suspended in the aqueous phase of the pesticide formulation (e.g. a SC formulation). The water-soluble pesticide, such as the auxin herbicide, has often a solubility in water at 20 °C of at least 10 g/l, preferably of at least 50 g/l, and in particular of at least 100 g/l. The water-insoluble pesticide has often a solubility in water at 20 °C of up to 10 g/l, preferably up to 1 g/l, and in particular up to 0,2 g/l.

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It is also possible to use at least one, such as one, two or three different pesticide formulations when preparing the tank mix.

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The term “**pesticide**” within the meaning of the invention states that one or more compounds can be selected from the group consisting of fungicides, insecticides, nematocides, herbicide and/or safener or growth regulator, preferably from the group consisting of fungicides, insecticides or herbicides, most preferably from the group consisting of herbicides. Also mixtures of pesticides of two or more the aforementioned classes can be used. The skilled artisan is familiar with such pesticides, which can be, for example, found in the Pesticide Manual, 15th Ed. (2009), The British Crop Protection Council, London. Suitable insecticides are insecticides from the class of the carbamates, organophosphates, organochlorine insecticides, phenylpyrazoles, pyrethroids, neonicotinoids, spinosins, avermectins, milbemycins, juvenile hormone analogs, alkyl halides, organotin compounds nereistoxin analogs, benzoylureas, diacylhydrazines, METI acarizides, and insecticides such as chloropicrin, pymetrozin, flonicamid, clofentezin, hexythiazox, etoxazole, diafenthiuron, propargite, tetradifon, chlorofenapyr, DNOC, buprofezine, cyromazine, amitraz, hydramethylnon, acequinocyl, fluacrypyrim, rotenone, or their derivatives. Suitable fungicides are fungicides from the classes of dinitroanilines, allylamines, anilinopyrimidines, antibiotics, aromatic hydrocarbons, benzenesulfonamides, benzimidazoles, benzisothiazoles, benzophenones, benzothiadiazoles, benzotriazines, benzyl carbamates, carbamates, carboxamides, carboxylic acid diamides, chloronitriles cyanoacetamide oximes, cyanoimidazoles, cyclopropanecarboxamides, dicarboximides, dihydrodioxazines, dinitrophenyl crotonates, dithiocarbamates, dithiolanes, ethylphosphonates, ethylaminothiazolecarboxamides, guanidines, hydroxy-(2-amino)pyrimidines, hydroxyanilides, imidazoles, imidazolinones, inorganic substances, isobenzofuranones, methoxyacrylates, methoxycarbamates, morpholines, N-phenylcarbamates, oxazolidinediones, oximinoacetates, oximinoacetamides, peptidylpyrimidine nucleosides, phenylacetamides, phenylamides, phenylpyrroles, phenylureas, phosphonates, phosphorothiolates, phthalamic acids, phthalimides, piperazines, piperidines, propionamides, pyridazinones, pyridines, pyridinylmethylbenzamides, pyrimidinamines, pyrimidines, pyrimidinonehydrazones, pyrroloquinolinones, quinazolinones, quinolines, quinones, sulfamides, sulfamoyltriazoles, thia-

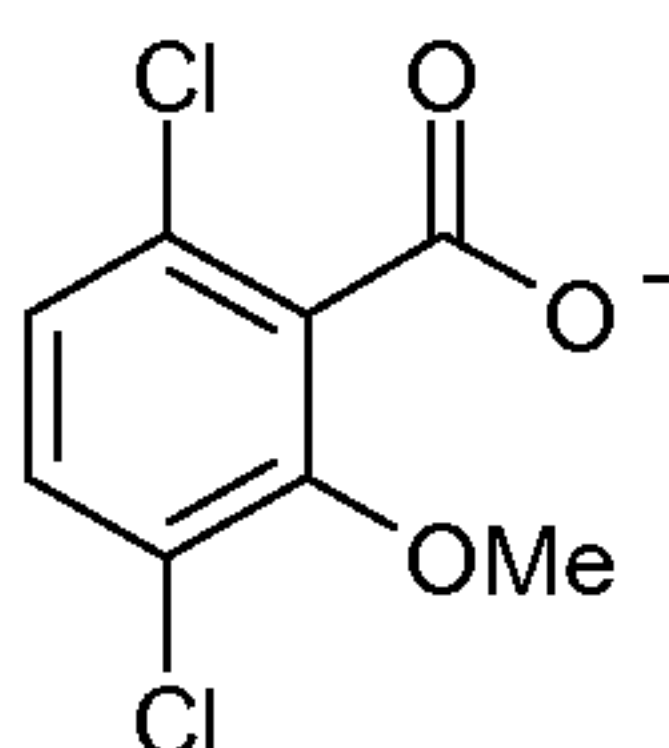
zolecarboxamides, thiocarbamates, thiophanates, thiophenecarboxamides, toluamides, tri-phenyltin compounds, triazines, triazoles. Suitable herbicides are herbicides from the classes of the acetamides, amides, aryloxyphenoxypropionates, benzamides, benzofuran, benzoic acids, benzothiadiazinones, bipyridylum, carbamates, chloroacetamides, chlorocarboxylic acids, cy-
 5 clohexanediones, dinitroanilines, dinitrophenol, diphenyl ether, glycines, imidazolinones, isoxa-
 zoles, isoxazolidinones, nitriles, N-phenylphthalimides, oxadiazoles, oxazolidinediones, oxa-
 cetamides, phenoxycarboxylic acids, phenylcarbamates, phenylpyrazoles, phenylpyrazolines,
 phenylpyridazines, phosphinic acids, phosphoramidates, phosphorodithioates, phthalamates,
 pyrazoles, pyridazinones, pyridines, pyridinecarboxylic acids, pyridinecarboxamides, pyrim-
 10 idinediones, pyrimidinyl(thio)benzoates, quinolinecarboxylic acids, semicarbazones, sulfonyla-
 minocarbonyltriaolinones, sulfonylureas, tetrazolinones, thiadiazoles, thiocarbamates, tria-
 zines, triazinones, triazoles, triazolinones, triazolocarboxamides, triazolopyrimidines, triketones,
 uracils, ureas.

15 The pesticide may be dissolved or dispersed (e.g. suspended) in the tank mix. Preferably, the auxin herbicide is dissolved in the tank mix. The pesticide, such as the auxin herbicide, has of-
 ten a solubility in water at 20 °C of at least 10 g/l, preferably of at least 50 g/l, and in particular of
 at least 100 g/l.

20 In another preferred form the pesticide contains a anionic pesticide. The term "**anionic pesticide**"
 refers to a pesticide, which is present as an anion. Preferably, anionic pesticides relate to pesti-
 cides comprising a protonizable hydrogen. More preferably, anionic pesticides relate to pesti-
 cides comprising a carboxylic, thiocarbonic, sulfonic, sulfinic, thiosulfonic, phosphinic, or phos-
 phorous acid group, especially a carboxylic acid group. The aforementioned groups may be
 25 partly present in neutral form including the protonizable hydrogen.

Usually, anions such as anionic pesticides comprise at least one anionic group. Preferably, the
 anionic pesticide comprises one or two anionic groups. In particular the anionic pesticide com-
 prises exactly one anionic group. An example of an anionic group is a carboxylate group (-
 30 C(O)O⁻). The aforementioned anionic groups may be partly present in neutral form including the
 protonizable hydrogen. For example, the carboxylate group may be present partly in neutral
 form of carboxylic acid (-C(O)OH). This is preferably the case in aqueous compositions, in
 which an equilibrium of carboxylate and carboxylic acid may be present.

35 Suitable anionic pesticides are given in the following. In case the names refer to a neutral form
 or a salt of the anionic pesticide, the anionic form of the anionic pesticides are meant. For ex-
 ample, the anionic form of dicamba may be represented by the following formula:



As another example, the anionic form of glyphosate may be a contain one, two, three, or a mixture thereof, negative charges.

It is known to an expert, that the dissociation of the functional groups and thus the location of the anionic charge may depend for example on the pH, when the anionic pesticides is present in dissolved form. The acid dissociation constants pK_a of glyphosate are typically 0.8 for the first phosphonic acid, 2.3 for the carboxylic acid, 6.0 for the second phosphonic acid, and 11.0 for the amine.

Suitable anionic pesticides are **herbicides**, which comprise a carboxylic, thiocarbonic, sulfonic, sulfinic, thiosulfonic or phosphorous acid group, especially a carboxylic acid group. Examples are aromatic acid herbicides, phenoxy-carboxylic acid herbicides or organophosphorous herbicides comprising a carboxylic acid group.

Suitable aromatic acid herbicides are benzoic acid herbicides, such as diflufenzopyr, naptalam, chloramben, dicamba, 2,3,6-trichlorobenzoic acid (2,3,6-TBA), tricamba; pyrimidinyloxybenzoic acid herbicides, such as bispyribac, pyriminobac; pyrimidinylthiobenzoic acid herbicides, such as pyri-thiobac; phthalic acid herbicides, such as chlorthal; picolinic acid herbicides, such as aminopyralid, clopyralid, picloram; quinolinecarboxylic acid herbicides, such as quinclorac, quinmerac; or other aromatic acid herbicides, such as aminocyclopyrachlor. Preferred are benzoic acid herbicides, especially dicamba.

Suitable phenoxy-carboxylic acid herbicides are phenoxyacetic herbicides, such as 4-chlorophenoxyacetic acid (4-CPA), (2,4-dichlorophenoxy)acetic acid (2,4-D), (3,4-dichlorophenoxy)acetic acid (3,4-DA), MCPA (4-(4-chloro-o-tolyloxy)butyric acid), MCPA-thioethyl, (2,4,5-trichlorophenoxy)acetic acid (2,4,5-T); phenoxybutyric herbicides, such as 4-CPB, 4-(2,4-dichlorophenoxy)butyric acid (2,4-DB), 4-(3,4-dichlorophenoxy)butyric acid (3,4-DB), 4-(4-chloro-o-tolyloxy)butyric acid (MCPB), 4-(2,4,5-trichlorophenoxy)butyric acid (2,4,5-TB); phenoxypropionic herbicides, such as cloprop, 2-(4-chlorophenoxy)propanoic acid (4-CPP), dichlorprop, dichlorprop-P, 4-(3,4-dichlorophenoxy)butyric acid (3,4-DP), fenoprop, mecoprop, mecoprop-P; aryloxyphenoxypropionic herbicides, such as chlorazifop, clodinafop, clofop, cyhalofop, diclofop, fenoxaprop, fenoxaprop-P, fenthiaprop, fluazifop, fluazifop-P, haloxyfop, haloxyfop-P, isoxapyrifop, metamifop, propaquizafop, quizalofop, quizalofop-P, trifop. Preferred are phenoxyacetic herbicides, especially 2,4-D.

The term "organophosphorous herbicides" usually refers to herbicides containing a phosphinic or phosphorous acid group. Suitable organophosphorous herbicides comprising a carboxylic acid group are bialafos, glufosinate, glufosinate-P, glyphosate. Preferred is glyphosate.

Suitable other herbicides comprising a carboxylic acid are pyridine herbicides comprising a carboxylic acid, such as fluroxypyr, triclopyr; triazolopyrimidine herbicides comprising a carboxylic acid, such as cloransulam; pyrimidinylsulfonylurea herbicides comprising a carboxylic acid, such

as bensulfuron, chlorimuron, foramsulfuron, halosulfuron, mesosulfuron, primisulfuron, sulfometuron; imidazolinone herbicides, such as imazamethabenz, imazamethabenz, imazamox, imazapic, imazapyr, imazaquin and imazethapyr; triazolinone herbicides such as flucarbazone, propoxycarbazone and thienincarbazone; aromatic herbicides such as acifluorfen, bifenox, carfentrazone, flufenpyr, flumiclorac, fluoroglycofen, fluthiacet, lactofen, pyraflufen. Further on, chlorflurenol, dalapon, endothal, flamprop, flamprop-M, flupropanate, flurenol, oleic acid, pelargonic acid, TCA may be mentioned as other herbicides comprising a carboxylic acid.

Suitable anionic pesticides are **fungicides**, which comprise a carboxylic, thiocarbonic, sulfonic, sulfinic, thiosulfonic or phosphorous acid group, especially a carboxylic acid group. Examples are polyoxin fungicides, such as polyoxorim.

Suitable anionic pesticides are **insecticides**, which comprise a carboxylic, thiocarbonic, sulfonic, sulfinic, thiosulfonic or phosphorous acid group, especially a carboxylic acid group. Examples are thuringiensin.

Suitable anionic pesticides are **plant growth regulator**, which comprise a carboxylic, thiocarbonic, sulfonic, sulfinic, thiosulfonic or phosphorous acid group, especially a carboxylic acid group. Examples are 1-naphthylacetic acid, (2-naphthyloxy)acetic acid, indol-3-ylacetic acid, 4-indol-3-ylbutyric acid, glyphosine, jasmonic acid, 2,3,5-triiodobenzoic acid, prohexadione, trinexapac, preferably prohexadione and trinexapac.

Preferred anionic pesticides are anionic herbicides, more preferably dicamba, glyphosate, 2,4-D, aminopyralid, aminocyclopyrachlor and MCPA. Especially preferred are dicamba and glyphosate. In another preferred embodiment, dicamba is preferred. In another preferred embodiment, 2,4-D is preferred. In another preferred embodiment, glyphosate is preferred. In another preferred embodiment, MCPA is preferred.

In another preferred form the pesticide comprises an **auxin herbicide**. Various synthetic and natural auxin herbicides are known, wherein synthetic auxin herbicides are preferred. Preferably, the auxin herbicide comprises a protonizable hydrogen. More preferably, auxin herbicides relate to pesticides comprising a carboxylic, thiocarbonic, sulfonic, sulfinic, thiosulfonic or phosphorous acid group, especially a carboxylic acid group. The aforementioned groups may be partly present in neutral form including the protonizable hydrogen. Examples for natural auxin herbicides are indole-3-acetic acid (IAA), phenyl acetic acid (PAA), 4-chloroindole-3-acetic acid (4-Cl-IAA), and indole-3-butanoic acid (IBA). Examples for synthetic auxin herbicides are 2,4-D and its salts, 2,4-DB and its salts, aminopyralid and its salts such as aminopyralid-tris(2-hydroxypropyl)ammonium, benazolin, chloramben and its salts, clomeprop, clopyralid and its salts, dicamba and its salts, dichlorprop and its salts, dichlorprop-P and its salts, fluroxypyr, MCPA and its salts, MCPA-thioethyl, MCPB and its salts, mecoprop and its salts, mecoprop-P and its salts, picloram and its salts, quinclorac, quinmerac, TBA (2,3,6) and its salts, triclopyr and its salts, and aminocyclopyrachlor and its salts. Preferred auxin herbicides are 2,4-D and its salts,

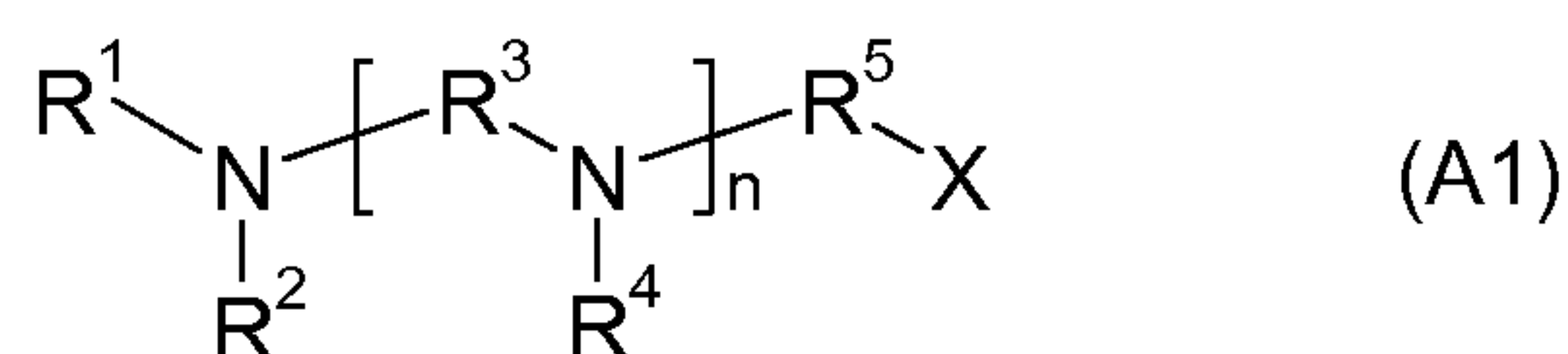
and dicamba and its salts, wherein dicamba is more preferred. In another more preferred form, the auxin herbicide contains an alkali metal salt of dicamba, such as sodium and/or potassium. Mixtures of the aforementioned auxin herbicides are also possible.

- 5 In another preferred form the pesticide contains **organophosphorous** herbicides (e.g. herbicides containing a phosphinic or phosphorous acid group) comprising a carboxylic acid group. Especially preferred further pesticides are bilanafos, glufosinate, glufosinate-P, glyphosate, and one or more pesticides from the class of imidazolinones. In particular preferred is glyphosate. In another particular preferred form, the further pesticide contains an alkali metal salt of glyphosate,
10 such as sodium and/or potassium glyphosate.

In a particular preferred form the pesticide formulation comprises dicamba, glyphosate or a mixture thereof. In another particular preferred form the first pesticide formulation comprises dicamba, and the second pesticide formulation comprises glyphosate.

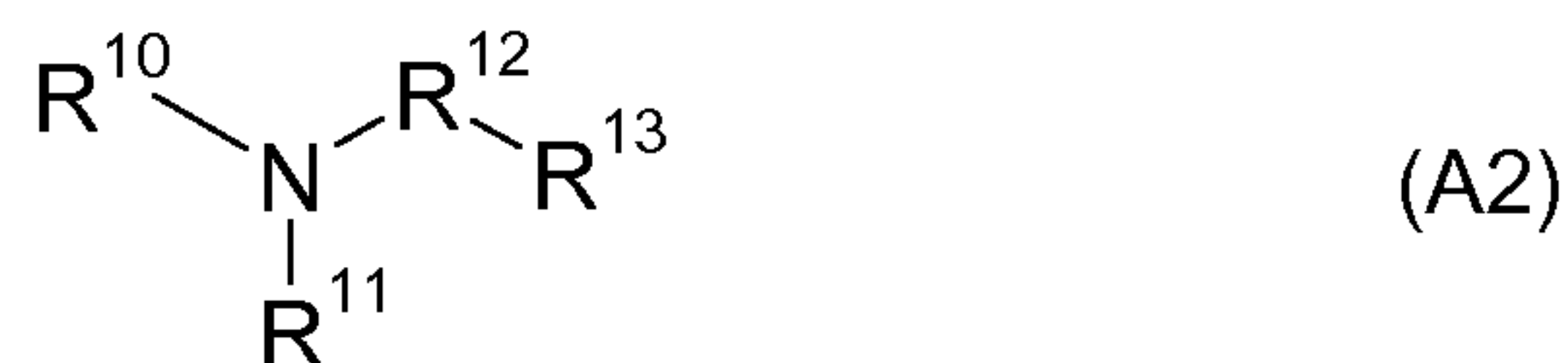
- 15 **Dicamba** is a known herbicide, which may be present in form of an protonated acid, in form of a salt, or a mixture thereof. Various dicamba salts may be used, such as dicamba sodium, dicamba dimethylamine, dicamba diglycylamine.

- 20 Preferably, dicamba is present in form of a dicamba polyamine salt and the polyamine has the formula (A1)



wherein R^1 , R^2 , R^4 , R^6 , and R^7 are independently H or C_1 - C_6 -alkyl, which is optionally substituted with OH,

- 25 R^3 and R^5 are independently C_2 - C_{10} -alkylene,
X is OH or NR^6R^7 , and
n is from 1 to 20;
or the formula (A2)



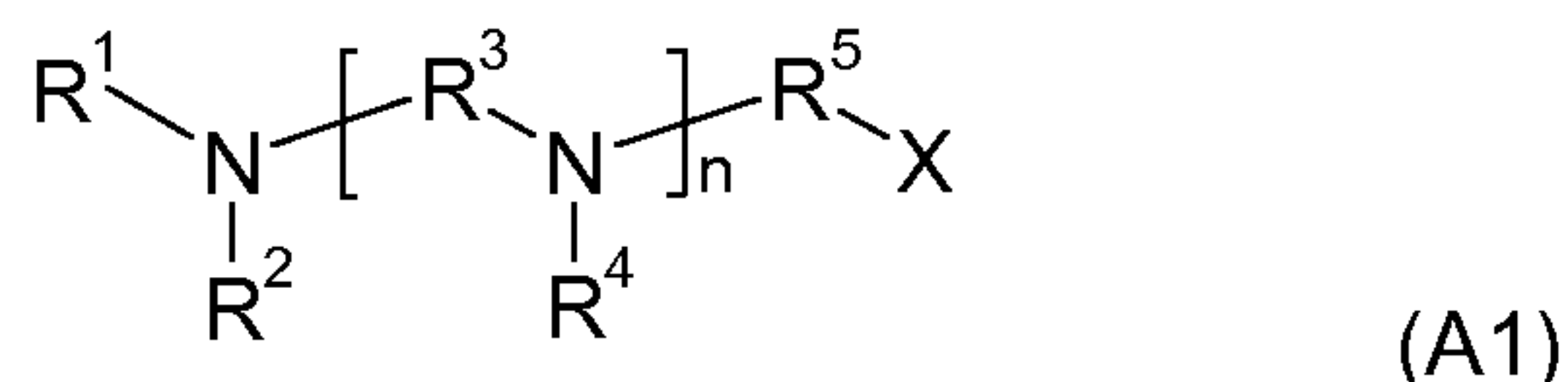
- 30 wherein R^{10} and R^{11} are independently H or C_1 - C_6 -alkyl,
 R^{12} is C_1 - C_{12} -alkylene, and
 R^{13} is an aliphatic C_5 - C_8 ring system, which comprises either nitrogen in the ring or which is substituted with at least one unit $NR^{10}R^{11}$.

- 35 The term "**polyamine**" within the meaning of the invention relates to an organic compound comprising at least two amino groups, such as an primary, secondary or tertiary amino group.

The dicamba polyamine salt usually comprises an anionic dicamba and a cationic polyamine. The term "**cationic polyamine**" refers to a polyamine, which is present as cation. Preferably, in a

cationic polyamine at least one amino group is present in the cationic form of an ammonium, such as $R-N^+H_3$, $R_2-N^+H_2$, or R_3-N^+H . An expert is aware which of the amine groups in the cationic polyamine is preferably protonated, because this depends for example on the pH or the physical form. In aqueous solutions the alkalinity of the amino groups of the cationic polyamine increases usually from tertiary amine to primary amine to secondary amine.

In an embodiment the cationic polyamine has the formula



wherein R^1 , R^2 , R^4 , R^6 , R^7 are independently H or C_1 - C_6 -alkyl, which is optionally substituted with OH, R^3 and R^5 are independently C_2 - C_{10} -alkylene, X is OH or NR^6R^7 , and n is from 1 to 20. R^1 , R^2 , R^4 , R^6 and R^7 are preferably independently H or methyl. Preferably, R^1 , R^2 , R^6 and R^7 are H. R^6 and R^7 are preferably identical to R^1 and R^2 , respectively. R^3 and R^5 are preferably independently C_2 - C_3 -alkylene, such as ethylene ($-CH_2CH_2-$), or n-propylene ($-CH_2CH_2CH_2-$). Typically, R^3 and R^5 are identical. R^3 and R^5 may be linear or branched, unsubstituted or substituted with halogen. Preferably, R^3 and R^5 are linear. Preferably, R^3 and R^5 are unsubstituted. X is preferably NR^6R^7 . Preferably, n is from 1 to 10, more preferably from 1 to 6, especially from 1 to 4. In another preferred embodiment, n is from 2 to 10. Preferably, R^1 , R^2 , and R^4 are independently H or methyl, R^3 and R^5 are independently C_2 - C_3 -alkylene, X is OH or NR^6R^7 , and n is from 1 to 10.

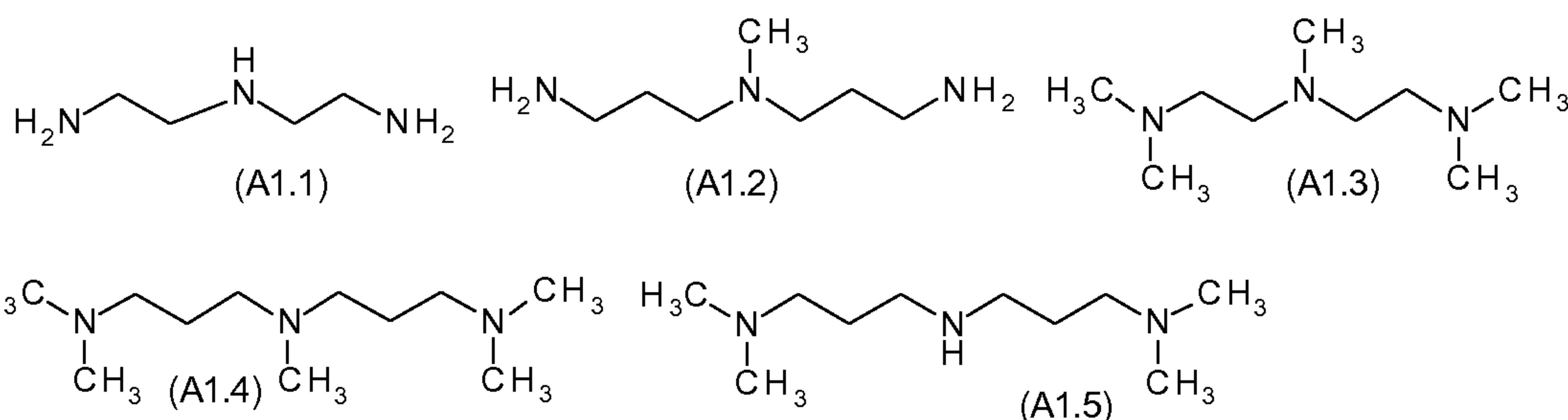
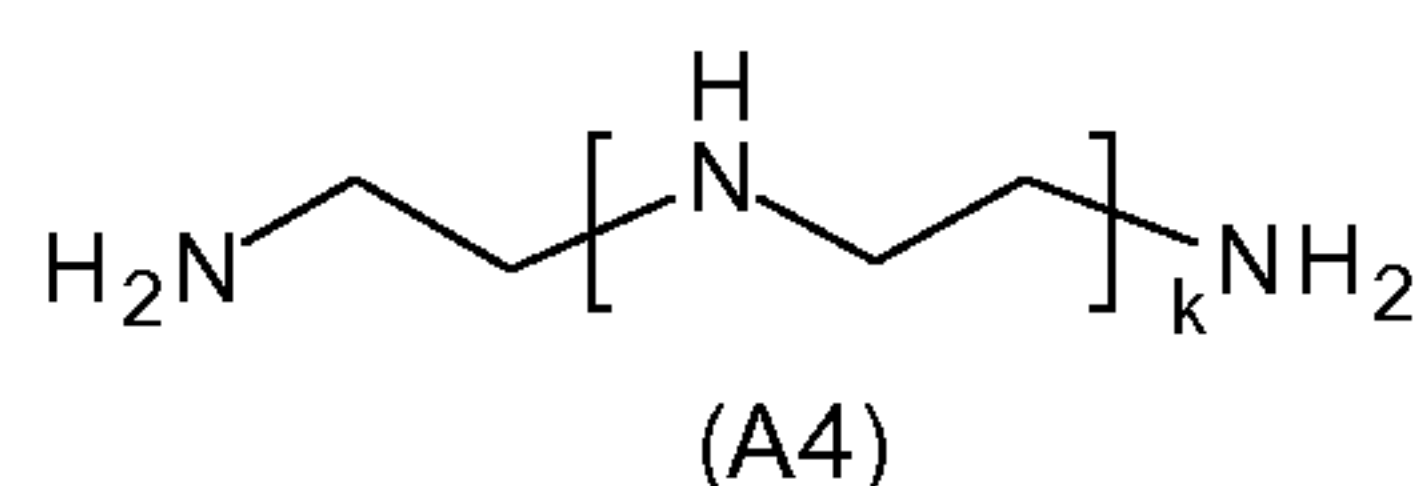
The group X is bound to R^5 , which is a C_2 - C_{10} -alkylene group. This means that X may be bound to any carbon atom of the C_2 - C_{10} -alkylene group. Examples of a unit $-R^5-X$ are $-CH_2-CH_2-CH_2-OH$ or $-CH_2-CH(OH)-CH_3$.

R^1 , R^2 , R^4 , R^6 , R^7 are independently H or C_1 - C_6 -alkyl, which is optionally substituted with OH. An example such a substituteion is formula (B1.9), in which R^4 is H or C_1 - C_6 -alkyl substituted with OH (more specifically, R^4 is C_3 -alkyl substituted with OH. Preferably, R^1 , R^2 , R^4 , R^6 , R^7 are independently H or C_1 - C_6 -alkyl.

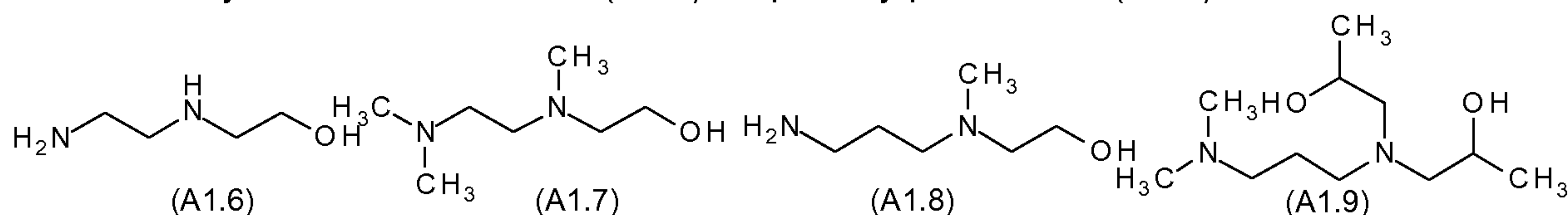
In another preferred embodiment the cationic polymer of the formula (A1) is free of ether groups ($-O-$). Ether groups are known to enhance photochemical degradation resulting in explosive radicals or peroxy groups.

Examples for cationic polyamines of the formula (A1) wherein X is NR^6R^7 are diethylenetriamine (DETA, (A4) with k = 1, corresponding to (A1.1)), triethylenetetraamine (TETA, (A4) with k = 2), tetraethylenepentaamine (TEPA, (A4) with k = 3). Technical qualities of TETA are often mixtures comprising in addition to linear TETA as main component also tris-aminoethylamine TAEA, Piperazinoethylethylenediamine PEEDA and Diaminoethylpiperazine DAEP. Technical qualities of TEPA a are often mixtures comprising in addition to linear TEPA as main component also aminoethyltris-aminoethylamine AE-TAEA, aminoethyldiaminoethylpiperazine AE-DAEP

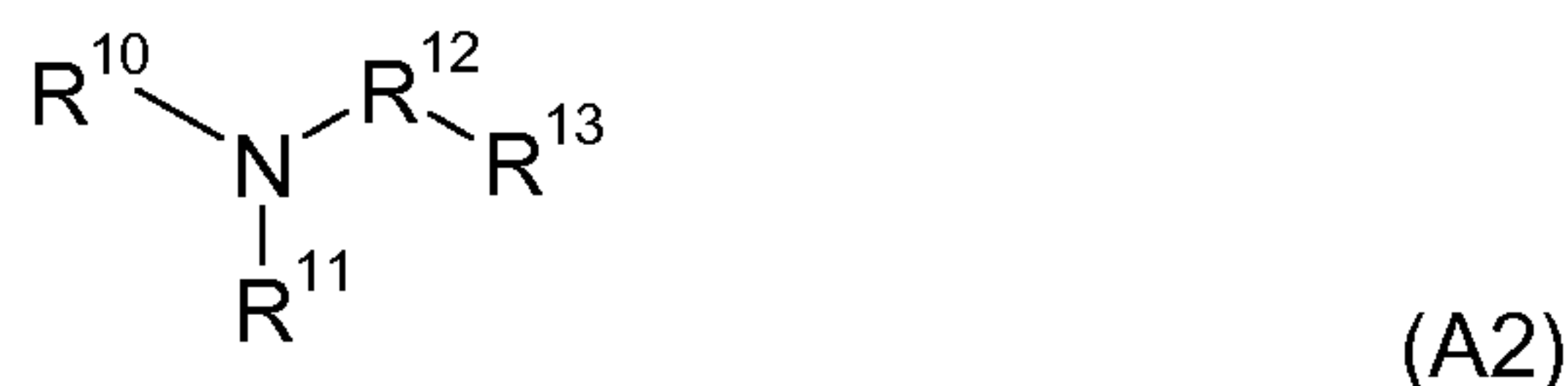
and aminoethylpiperazinoethylethylenediamine AE-PEEDA. Such ethyleneamines are commercially available from Dow Chemical Company. Further examples are Pentamethyldiethylenetriamine PMDETA (B1.3), N,N,N',N'',N''-pentamethyl-dipropylenetriamine (B1.4) (commercially available as Jeffcat® ZR-40), N,N-bis(3-dimethylaminopropyl)-N-isopropanolamine (commercially available as Jeffcat® ZR-50), N'-(3-(dimethylamino)propyl)-N,N-dimethyl-1,3-propanediamine (A1.5) (commercially available as Jeffcat® Z-130), and N,N-Bis(3-aminopropyl)methylamine BAPMA (A1.2). Especially preferred are (A4), wherein k is from 1 to 10, (A1.2), (A1.4) and (A1.5). Most preferred are (A4), wherein k is 1, 2, 3, or 4 and (A1.2). In particular preferred are (A1.1) and (A1.2), wherein the latter is most preferred.



Examples for polyamines of the formula (A1) wherein X is OH are N-(3-dimethylaminopropyl)-N,N-diisopropanolamine DPA (A1.9), N,N,N'-trimethylaminoethyl-ethanolamine (A1.7) (commercially available as Jeffcat® Z-110), aminopropylmonomethylethanolamine APMMEA (A1.8), and aminoethylethanolamine AEEA (A1.6). Especially preferred is (A1.6).



In another embodiment the cationic polyamine has the formula



wherein R¹⁰ and R¹¹ are independently H or C₁-C₆-alkyl, R¹² is C₂-C₁₂-alkylene, and R¹³ is an aliphatic C₅-C₈ ring system, which comprises either nitrogen in the ring or which is substituted with at least one unit NR¹⁰R¹¹.

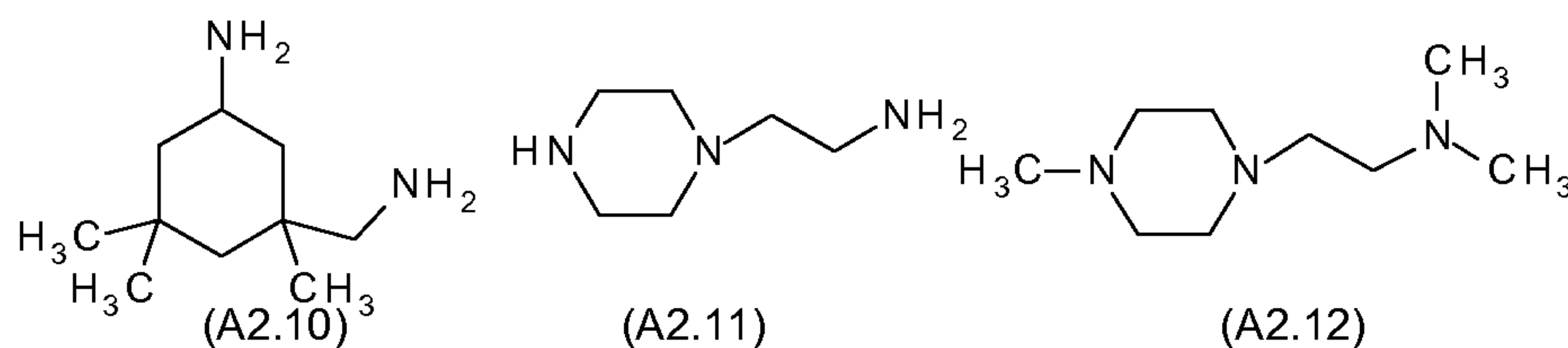
R¹⁰ and R¹¹ are preferably independently H or methyl, more preferably H. Typically R¹⁰ and R¹¹ are linear or branched, unsubstituted or substituted with halogen. Preferably, R¹⁰ and R¹¹ are unsubstituted and linear. More preferably, R¹⁰ and R¹¹ are identical.

R^{12} is preferably C_2 - C_4 -alkylene, such as ethylene ($-CH_2CH_2-$), or n-propylene ($-CH_2CH_2CH_2-$). R^{12} may be linear or branched, preferably it is linear. R^{12} may be unsubstituted or substituted with halogen, preferably it is unsubstituted.

- 5 R^{13} is an aliphatic C_5 - C_8 ring system, which comprises either nitrogen in the ring or which is substituted with at least one unit $NR^{10}R^{11}$. Preferably, R^{13} is an aliphatic C_5 - C_8 ring system, which comprises nitrogen in the ring. The C_5 - C_8 ring system may be unsubstituted or substituted with at least one C_1 - C_6 alkyl group or at least one halogen. Preferably, the C_5 - C_8 ring system is unsubstituted or substituted with at least one C_1 - C_4 alkyl group. Examples for an aliphatic C_5 - C_8 ring system, which comprises nitrogen in the ring, are piperazyl groups. Examples for R^{13} being an aliphatic C_5 - C_8 ring system, which comprises nitrogen in the ring, are the compounds of the formula (A2.11) and (A2.12) below. Examples for R^{13} being an aliphatic C_5 - C_8 ring system, which is substituted with at least one unit $NR^{10}R^{11}$ is the compound of the formula (A2.10) below.

- 15 More preferably, R^{10} and R^{11} are independently H or methyl, R^{12} is C_2 - C_3 -alkylene, and R^{13} is an aliphatic C_5 - C_8 ring system, which comprises oxygen or nitrogen in the ring. In another preferred embodiment the cationic polymer of the formula (A2) is free of ether groups ($-O-$).

- 20 Especially preferred cationic polyamines of formula (A2) are isophorone diamine ISPA (A2.10), aminoethylpiperazine AEP (A2.11), and 1-methyl-4-(2-dimethylaminoethyl)piperazine TAP (A2.12). These compounds are commercially available from Huntsman or Dow, USA. Preferred are (A2.10) and (A2.11), more preferably (A2.11). In another embodiment (A2.11) and (A2.12) are preferred.



- 25 Dicamba is most preferred present in form of a N,N-bis(3-aminopropyl)methylamine (so called "BAPMA") salt.

- 30 The pesticide formulation contains usually at least 50 g/l, preferably at least 300 g/l, more preferably at least 400 g/l, and in particular at least 450 g/l acid equivalents (AE) of dicamba. The pesticide formulation contains usually up to 800 g/l, preferably up to 700 g/l, more preferably up to 650 g/l, and in particular up to 600 g/l acid equivalents (AE) of dicamba.

- 35 The pesticide formulation according to the invention is usually present in form of a homogeneous solution, e.g. at 20 °C.

The invention also relates to a **method of controlling** phytopathogenic fungi and/or undesired vegetation and/or undesired insect or mite attack and/or for regulating the growth of plants,

wherein the tank mix or the pesticide formulation is allowed to act on the respective pests, their environment or the plants to be protected from the respective pest, on the soil and/or on undesired plants and/or the crop plants and/or their environment.

- 5 Examples of suitable **crops** and plants to be protected are the following:
 Allium cepa, Ananas comosus, Arachis hypogaea, Asparagus officinalis, Avena sativa, Beta vulgaris spec. altissima, Beta vulgaris spec. rapa, Brassica napus var. napus, Brassica napus var. napobrassica, Brassica rapa var. silvestris, Brassica oleracea, Brassica nigra, Brassica juncea, Brassica campestris, Camellia sinensis, Carthamus tinctorius, Carya illinoensis, Citrus
 10 limon, Citrus sinensis, Coffea arabica (Coffea canephora, Coffea liberica), Cucumis sativus, Cynodon dactylon, Daucus carota, Elaeis guineensis, Fragaria vesca, Glycine max, Gossypium hirsutum, (Gossypium arboreum, Gossypium herbaceum, Gossypium vitifolium), Helianthus annuus, Hevea brasiliensis, Hordeum vulgare, Humulus lupulus, Ipomoea batatas, Juglans regia, Lens culinaris, Linum usitatissimum, Lycopersicon lycopersicum, Malus spec., Manihot
 15 esculenta, Medicago sativa, Musa spec., Nicotiana tabacum (N.rustica), Olea europaea, Oryza sativa, Phaseolus lunatus, Phaseolus vulgaris, Picea abies, Pinus spec., Pistacia vera, Pisum sativum, Prunus avium, Prunus persica, Pyrus communis, Prunus armeniaca, Prunus cerasus, Prunus dulcis and prunus domestica, Ribes sylvestre, Ricinus communis, Saccharum officinarum, Secale cereale, Sinapis alba, Solanum tuberosum, Sorghum bicolor (s. vulgare), Theobroma
 20 cacao, Trifolium pratense, Triticum aestivum, Triticale, Triticum durum, Vicia faba, Vitis vinifera, Zea mays.

- Preferred crops are: Arachis hypogaea, Beta vulgaris spec. altissima, Brassica napus var. napus, Brassica oleracea, Brassica juncea, Citrus limon, Citrus sinensis, Coffea arabica (Coffea
 25 canephora, Coffea liberica), Cynodon dactylon, Glycine max, Gossypium hirsutum, (Gossypium arboreum, Gossypium herbaceum, Gossypium vitifolium), Helianthus annuus, Hordeum vulgare, Juglans regia, Lens culinaris, Linum usitatissimum, Lycopersicon lycopersicum, Malus spec., Medicago sativa, Nicotiana tabacum (N.rustica), Olea europaea, Oryza sativa , Phaseolus lunatus, Phaseolus vulgaris, Pistacia vera, Pisum sativum, Prunus dulcis, Sac-
 30 charum officinarum, Secale cereale, Solanum tuberosum, Sorghum bicolor (s. vulgare), Triticale, Triticum aestivum, Triticum durum, Vicia faba, Vitis vinifera and Zea mays.

- The method according to the invention can preferably be used in **genetically modified crops**.
 The term “genetically modified crops” is to be understood as plants, which genetic material has
 35 been modified by the use of recombinant DNA techniques in a way that under natural circumstances it cannot readily be obtained by cross breeding, mutations, natural recombination, breeding, mutagenesis, or genetic engineering. Typically, one or more genes have been integrated into the genetic material of a genetically modified plant in order to improve certain properties of the plant. Such genetic modifications also include but are not limited to targeted post-
 40 transtional modification of protein(s), oligo- or polypeptides e. g. by glycosylation or polymer additions such as prenylated, acetylated or farnesylated moieties or PEG moieties.

Plants that have been modified by breeding, mutagenesis or genetic engineering, e.g. have been rendered tolerant to applications of specific classes of herbicides, are particularly useful with the composition and method according to the invention. **Tolerance** to classes of herbicides has been developed such as **auxin herbicides** such as dicamba or 2,4-D (i.e. auxin tolerant crops); bleacher herbicides such as hydroxyphenylpyruvate dioxygenase (HPPD) inhibitors or phytoene desaturase (PDS) inhibitors; acetolactate synthase (ALS) inhibitors such as sulfonyl ureas or imidazolinones; enolpyruvyl shikimate 3-phosphate synthase (EPSP) inhibitors such as glyphosate; glutamine synthetase (GS) inhibitors such as glufosinate; protoporphyrinogen-IX oxidase (PPO) inhibitors; lipid biosynthesis inhibitors such as acetyl CoA carboxylase (ACCase) inhibitors; or oxynil (i. e. bromoxynil or ioxynil) herbicides as a result of conventional methods of breeding or genetic engineering. Furthermore, plants have been made **resistant to multiple classes of herbicides** through multiple genetic modifications, such as resistance to both glyphosate and glufosinate or to both glyphosate and a herbicide from another class such as ALS inhibitors, HPPD inhibitors, auxin herbicides, or ACCase inhibitors. These herbicide resistance technologies are, for example, described in Pest Management Science 61, 2005, 246; 61, 2005, 258; 61, 2005, 277; 61, 2005, 269; 61, 2005, 286; 64, 2008, 326; 64, 2008, 332; Weed Science 57, 2009, 108; Australian Journal of Agricultural Research 58, 2007, 708; Science 316, 2007, 1185; and references quoted therein. Examples of these herbicide resistance technologies are also described in US 2008/0028482, US2009/0029891, WO 2007/143690, WO 2010/080829, US 6307129, US 7022896, US 2008/0015110, US 7,632,985, US 7105724, and US 7381861, each herein incorporated by reference.

Several cultivated plants have been rendered tolerant to herbicides by conventional methods of breeding (mutagenesis), e. g. Clearfield® summer rape (Canola, BASF SE, Germany) being tolerant to imidazolinones, e. g. imazamox, or ExpressSun® sunflowers (DuPont, USA) being tolerant to sulfonyl ureas, e. g. tribenuron. Genetic engineering methods have been used to render cultivated plants such as soybean, cotton, corn, beets and rape, tolerant to herbicides such as glyphosate, dicamba, imidazolinones and glufosinate, some of which are under development or commercially available under the brands or trade names RoundupReady® (glyphosate tolerant, Monsanto, USA), Cultivance® (imidazolinone tolerant, BASF SE, Germany) and LibertyLink® (glufosinate tolerant, Bayer CropScience, Germany).

Preferably, the crops are genetically modified crops, that are **tolerant at least to auxins**, in particular crops which are tolerant at least to dicamba or 2,4-D. In a preferred form the crops are tolerant to auxins (e.g. dicamba or 2,4-D) and to glyphosate.

Furthermore, plants are also covered that are by the use of recombinant DNA techniques capable to synthesize one or more insecticidal proteins, especially those known from the bacterial genus *Bacillus*, particularly from *Bacillus thuringiensis*, such as δ -endotoxins, e. g. CryIA(b), CryIA(c), CryIF, CryIF(a2), CryIIA(b), CryIIIA, CryIIIB(b1) or Cry9c; vegetative insecticidal proteins (VIP), e. g. VIP1, VIP2, VIP3 or VIP3A; insecticidal proteins of bacteria colonizing nematodes, e. g. *Photorhabdus* spp. or *Xenorhabdus* spp.; toxins produced by animals, such as

scorpion toxins, arachnid toxins, wasp toxins, or other insect-specific neurotoxins; toxins produced by fungi, such as Streptomyces toxins, plant lectins, such as pea or barley lectins; agglutinins; proteinase inhibitors, such as trypsin inhibitors, serine protease inhibitors, patatin, cystatin or papain inhibitors; ribosome-inactivating proteins (RIP), such as ricin, maize-RIP, abrin, luffin, saporin or bryodin; steroid metabolism enzymes, such as 3-hydroxy-steroid oxidase, ecdysteroid-IDP-glycosyl-transferase, cholesterol oxidases, ecdysone inhibitors or HMG-CoA-reductase; ion channel blockers, such as blockers of sodium or calcium channels; juvenile hormone esterase; diuretic hormone receptors (helicokinin receptors); stilben synthase, bibenzyl synthase, chitinases or glucanases. In the context of the present invention these insecticidal proteins or toxins are to be understood expressly also as pre-toxins, hybrid proteins, truncated or otherwise modified proteins. Hybrid proteins are characterized by a new combination of protein domains, (see, e. g. WO 02/015701). Further examples of such toxins or genetically modified plants capable of synthesizing such toxins are disclosed, e. g., in EP-A 374 753, WO 93/007278, WO 95/34656, EP-A 427 529, EP-A 451 878, WO 03/18810 und WO 03/52073. The methods for producing such genetically modified plants are generally known to the person skilled in the art and are described, e. g. in the publications mentioned above. These insecticidal proteins contained in the genetically modified plants impart to the plants producing these proteins tolerance to harmful pests from all taxonomic groups of arthropods, especially to beetles (Coleoptera), two-winged insects (Diptera), and moths (Lepidoptera) and to nematodes (Nematoda). Genetically modified plants capable to synthesize one or more insecticidal proteins are, e. g., described in the publications mentioned above, and some of which are commercially available such as YieldGard® (corn cultivars producing the Cry1Ab toxin), YieldGard® Plus (corn cultivars producing Cry1Ab and Cry3Bb1 toxins), Starlink® (corn cultivars producing the Cry9c toxin), Herculex® RW (corn cultivars producing Cry34Ab1, Cry35Ab1 and the enzyme Phosphinothricin-N-Acetyltransferase [PAT]); NuCOTN® 33B (cotton cultivars producing the Cry1Ac toxin), Bollgard® I (cotton cultivars producing the Cry1Ac toxin), Bollgard® II (cotton cultivars producing Cry1Ac and Cry2Ab2 toxins); VIPCOT® (cotton cultivars producing a VIP-toxin); NewLeaf® (potato cultivars producing the Cry3A toxin); Bt-Xtra®, NatureGard®, KnockOut®, BiteGard®, Protecta®, Bt11 (e. g. Agrisure® CB) and Bt176 from Syngenta Seeds SAS, France, (corn cultivars producing the Cry1Ab toxin and PAT enzyme), MIR604 from Syngenta Seeds SAS, France (corn cultivars producing a modified version of the Cry3A toxin, c.f. WO 03/018810), MON 863 from Monsanto Europe S.A., Belgium (corn cultivars producing the Cry3Bb1 toxin), IPC 531 from Monsanto Europe S.A., Belgium (cotton cultivars producing a modified version of the Cry1Ac toxin) and 1507 from Pioneer Overseas Corporation, Belgium (corn cultivars producing the Cry1F toxin and PAT enzyme).

Furthermore, plants are also covered that are by the use of recombinant DNA techniques capable to synthesize one or more proteins to increase the resistance or tolerance of those plants to bacterial, viral or fungal pathogens. Examples of such proteins are the so-called "pathogenesis-related proteins" (PR proteins, see, e.g. EP-A 392 225), plant disease resistance genes (e. g. potato cultivars, which express resistance genes acting against *Phytophthora infestans* derived from the mexican wild potato *Solanum bulbocastanum*) or T4-lysozyme (e.g. potato cultivars

capable of synthesizing these proteins with increased resistance against bacteria such as *Erwinia amylovora*). The methods for producing such genetically modified plants are generally known to the person skilled in the art and are described, e.g. in the publications mentioned above.

5

Furthermore, plants are also covered that are by the use of recombinant DNA techniques capable to synthesize one or more proteins to increase the productivity (e.g. bio mass production, grain yield, starch content, oil content or protein content), tolerance to drought, salinity or other growth-limiting environmental factors or tolerance to pests and fungal, bacterial or viral pathogens of those plants.

10

Furthermore, plants are also covered that contain by the use of recombinant DNA techniques a modified amount of substances of content or new substances of content, specifically to improve human or animal nutrition, e. g. oil crops that produce health-promoting long-chain omega-3 fatty acids or unsaturated omega-9 fatty acids (e. g. Nexera® rape, DOW Agro Sciences, Canada).

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Furthermore, plants are also covered that contain by the use of recombinant DNA techniques a modified amount of substances of content or new substances of content, specifically to improve raw material production, e.g. potatoes that produce increased amounts of amylopectin (e.g. Amflora® potato, BASF SE, Germany).

20

Furthermore, it has been found that the composition and method according to the invention are also suitable for the **defoliation** and/or desiccation of plant parts, for which crop plants such as cotton, potato, oilseed rape, sunflower, soybean or field beans, in particular cotton, are suitable. In this regard compositions have been found for the desiccation and/or defoliation of plants, processes for preparing these compositions, and methods for desiccating and/or defoliating plants using the composition and method according to the invention.

25

As desiccants, the composition and method according to the invention are suitable in particular for desiccating the above-ground parts of crop plants such as potato, oilseed rape, sunflower and soybean, but also cereals. This makes possible the fully mechanical harvesting of these important crop plants.

30

Also of economic interest is the **facilitation of harvesting**, which is made possible by concentrating within a certain period of time the dehiscence, or reduction of adhesion to the tree, in citrus fruit, olives and other species and varieties of pomaceous fruit, stone fruit and nuts. The same mechanism, i.e. the promotion of the development of abscission tissue between fruit part or leaf part and shoot part of the plants is also essential for the controlled defoliation of useful plants, in particular cotton. Moreover, a shortening of the time interval in which the individual cotton plants mature leads to an increased fiber quality after harvesting.

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The composition and method according to the invention can be applied **pre- or post-emergence**, or together with the seed of a crop plant. It is also possible to apply the compounds and compositions by applying seed, pretreated with a composition of the invention, of a crop plant. If the active compounds A and C and, if appropriate C, are less well tolerated by certain crop plants, application techniques may be used in which the herbicidal compositions are sprayed, with the aid of the spraying equipment, in such a way that as far as possible they do not come into contact with the leaves of the sensitive crop plants, while the active compounds reach the leaves of undesirable plants growing underneath, or the bare soil surface (post-directed, lay-by).

- 10 The term "growth stage" refers to the growth stages as defined by the **BBCH Codes** in "Growth stages of mono- and dicotyledonous plants", 2nd edition 2001, edited by Uwe Meier from the Federal Biological Research Centre for Agriculture and Forestry. The BBCH codes are a well established system for a uniform coding of phonologically similar growth stages of all mono- and dicotyledonous plant species. In some countries related codes are known for specific crops.
- 15 Such codes may be correlated to the BBCH code as exemplified by Harell et al., Agronomy J., 1998, 90, 235-238.

The tank mix may be allowed to act on crops at any growth stage, such as at BBCH Code 0, 1, 2, 3, 4, 5, 6 and/or 7. Preferably, the tank mix is allowed to act on crops at a growth stage of BBCH Code 0, 1 and/or 2, or their habitat. In another preferred form, the tank mix is allowed to act on crops at a growth stage of BBCH Code 1, 2, 3, 4, 5, 6 and/or 7, especially 2, 3, 4, 5, 6 and/or 7.

The treatment of crop with a pesticide may be done by applying said pesticide by **ground or aerial application**, preferably by ground application. Suitable application devices are a predosage device, a knapsack sprayer, a spray tank or a spray plane. Preferably the treatment is done by ground application, for example by a predosage device, a knapsack sprayer or a spray tank. The ground application may be done by a user walking through the crop field or with a motor vehicle, preferably with a motor vehicle.

30 Usually, the tank mix is sprayed through a **flat fan nozzle**. Preferably, the tank mix is sprayed through an air induction flat fan nozzle (also called venture flat fan nozzle or injector flat fan nozzle). Such spray nozzles are commercially available, e.g. from Hypro LLC, Cambridge, Lechler, Germany, or agrotop, Germany.

35 The term "**effective amount**" denotes an amount of the tank mix, which is sufficient for controlling undesired vegetation and which does not result in a substantial damage to the treated crops. Such an amount can vary in a broad range and is dependent on various factors, such as the species to be controlled, the treated cultivated plant or habitat, the climatic conditions and the pesticide.

40

The tank mix is typically applied at a volume of **5 to 5000 l/ha**, preferably of 50 to 500 l/ha.

The tank mix is typically applied at a rate of 5 to 3000 g/ha pesticide (e.g. dicamba), preferably 20 to 1500 g/ha.

- 5 In a further embodiment, the composition or method according to the invention can be applied by **treating seed**. The treatment of seed comprises essentially all procedures familiar to the person skilled in the art (seed dressing, seed coating, seed dusting, seed soaking, seed film coating, seed multilayer coating, seed encrusting, seed dripping and seed pelleting) based on the composition and method according to the invention. Here, the herbicidal compositions can be
10 applied diluted or undiluted.

The term seed comprises seed of all types, such as, for example, corns, seeds, fruits, tubers, seedlings and similar forms. Here, preferably, the term seed describes corns and seeds.

- 15 The seed used can be seed of the useful plants mentioned above, but also the seed of transgenic plants or plants obtained by customary breeding methods.

The rates of application of the active compound are from 0.0001 to 3.0, preferably 0.01 to 1.0 kg/ha of active substance (a.s.), depending on the control target, the season, the target plants
20 and the growth stage. To treat the seed, the pesticides are generally employed in amounts of from 0.001 to 10 kg per 100 kg of seed.

The present invention also relates to a **use** of the tank mix adjuvant **for increasing the efficacy** of a pesticide, wherein the tank mix adjuvant comprises a base selected from a carbonate and/or a
25 phosphate, and wherein the tank mix adjuvant is present in form of an aqueous liquid, which contains at least 200 g/l of the base, or in form of a particulate solid, which contains at least 50 wt% of the base.

The present invention also relates to the **tank mix adjuvant** which comprises a polypropylene glycol and a triblock polymer comprising at least one polyethyleneoxide moiety and at least one
30 polypropyleneoxide moiety. The tank mix adjuvant usually contains at least 50 wt%, preferably at least 70 wt%, and in particular at least 90 wt% of the polypropylene glycol and the triblock polymer. In another preferred form the tank mix adjuvant consists of the polypropylene glycol and the triblock polymer. In a more preferred form the tank mix adjuvant contains at least 5
35 wt%, preferably at least 10 wt%, more preferably at least 15 and in particular at least 20 wt% of the polypropylene glycol and the triblock polymer.

Preferably, the tank mix adjuvant is essentially **free of pesticides**. This means, that the tank mix adjuvant usually contains less than 5 wt%, preferably less than 1 wt%, more preferably less
40 than 0,2 wt%, and in particular less than 0,05 wt% of a pesticide.

The tank mix adjuvant may be liquid or solid, preferably it is a **liquid** at 20 °C. Preferably, the tank mix adjuvant is a homogenous liquid, which means that it consists of only one liquid phase.

The tank mix adjuvant may comprise **further auxiliaries**. Typically, the adjuvant contains up to 80 wt%, preferably up to 50 wt%, more preferably up to 20 wt% and in particular up to 3 wt% of further auxiliaries. In a preferred form, the adjuvant contains up to 98 wt%, preferably up to 95 wt%, more preferably up to 90 wt% and in particular up to 80 wt% of further auxiliaries. Examples for further auxiliaries are solvents, liquid carriers, surfactants, dispersants, emulsifiers, wetters, solubilizers, penetration enhancers, protective colloids, adhesion agents, thickeners, repellents, compatibilizers, bactericides, anti-freezing agents, anti-foaming agents, colorants.

The present invention also relates to a **use** of the tank mix adjuvant for reducing the wind drift of a pesticide formulation. Usually, the the wind drift is reduced when the amount of fines with a particle size of below 150 µm is reduced.

The invention offers various **advantages**: There is a very low rate of unwanted phytotoxic damage in neighboring areas in which other crops (e.g. dicotyledon crops) grow; the pesticidal effect of the pesticide is increased; the tank mix adjuvants are easy and safe to handle and to apply; the wind drift of the pesticide formulation is reduced; the amount of fines below 150 µm is reduced; and the tank mix adjuvant may be incorporated in pesticide formulations.

Examples

Glyphosate SL1: Aqueous solution of 49 wt% potassium glyphosate (CAS 70901-12-1), SL formulation type, commercially available as Roundup WeatherMax® from Monsanto.

Glyphosate SL2: Aqueous solution of 500 g/l potassium glyphosate (CAS 39600-42-5), SL formulation type, commercially available as Touchdown Hitech® from Syngenta.

Dicamba SL: Aqueous solution of 600 g/l dicamba (N,N-bis(3aminopropyl)methylamine salt).

Mix A: Liquid adjuvant composition containing 300 g/l C16/18 alcohol, ethoxylated and propoxylated; 180 g/l ethoxylated (10 EO) 2-propylheptylamine; 20 g/l C10-13-alkylbenzene sulfonic acid, Bp 185-190 °C, Mp about -14 °C; 100 g/l nonionic C8/10 alkylpolyglycosid (about 70 wt% active content and 30 wt% water), viscous liquid, HLB 13-14; 77 g/l water and glycerol up to 1,0 l.

PPG: Polypropylene glycol, average molar mass about 4000 g/mol, liquid at room temperature, solidification temperature about -35 °C.

Triblock A: Polyethyleneoxide polypropyleneoxide polyethyleneoxide (EO-PO-EO) triblock polymer, molar mass about 2500-2800, molar mass of PO block about 2200-2500 g/mol, amount of PE block in triblock polymer about 10%, surface tension (1 g/l in water at room temperature) about 35 mN/m.

Triblock B: Polyethyleneoxide polypropyleneoxide polyethyleneoxide (EO-PO-EO) triblock polymer, molar mass about 3300-3800, molar mass of PO block about 3100-3400 g/mol, amount of PE block in triblock polymer about 10%, surface tension (1 g/l in water at room temperature) about 36 mN/m

Triblock C: Polypropyleneoxide polyethyleneoxide polypropyleneoxide (PO-EO-PO) triblock polymer, molar mass about 3300-3800, amount of PE blocks in triblock polymer about 10%, surface tension (1 g/l in water at room temperature) about 38 mN/m, solidification temperature about -30 °C, dynamic viscosity at room temperature about 600 mPas.

Example 1 - Preparation of adjuvants

The adjuvant samples A to L were prepared by mixing the triblock polymer and the polypropylene glycol as indicated in Table 1 at room temperature.

Table 1: Composition of adjuvant samples

Sample	Triblock polymer	Amount Triblock polymer	Amount PPG
A	Triblock A	100%	-
B	Triblock A	95%	5%
C	Triblock A	90%	10%
D	Triblock A	80%	20%
E	Triblock B	100%	-
F	Triblock B	95%	5%
G	Triblock B	90%	10%
H	Triblock B	80%	20%
I	Triblock C	100%	-
J	Triblock C	95%	5%
K	Triblock C	90%	10%
L	Triblock C	80%	20%

Example 2 – Method for analyzing spray drift of tank mixes

The amount of spray drift is influenced by the amount of fine particles from the spray nozzle tip. Typically, spray particles of less than 150 µm in size have a significant higher potential to remain in the air and to be less affected by wind to be carried off-site.

The tank mix was sprayed at 2,76 bar through an air injector spray nozzle IDK 120-04 C from Lecher, Germany. The droplet size distribution is measured with a Sympatec Helos KF Laser diffraction device. Measurement is in 31 particle size classes from 18 to 3500 µm. The nozzle stand allows quick changing of nozzle types. The fan of the nozzles is parallel to the laser. To generate the correct optical density half of the fan is removed by a roof above the laser beam. The pressure is measured on the nozzle stand. The formulations are inserted in the spray tank

with the respective concentrations. The analysis of data is based on 10 measurements collected in two runs. If necessary the lenses are cleaned in-between.

5 Example 3 – Reduced spray drift

An aqueous tank mix was prepared by mixing Glyphosate SL1, Dicamba SL, any one of adjuvant samples A-L prepared in Example 1, and water at room temperature. The spray drift was analyzed as described in Example 2. The application rate was 1120 g active/ha for Glyphosate SL1, 500 g active/ha for Dicamba SL, and 0,1 l/ha of adjuvant sample A-L. The water rate was 94 l/ha.

The results are summarized in Table 2-4. The column “Fines Relative” was calculated in relation to the value of “Fines >150 µm” for the sample without the adjuvant.

15 Table 2:

Adjuvant	PPG [%]	Fines <150 µm [%]	Fines Relativ [%]
-	0	23,3	100
A	0	20,6	88
B	5	11,8	51
C	10	7,8	33
D	20	10,2	44

Table 3:

Adjuvant	PPG [%]	Fines <150 µm [%]	Fines Relativ [%]
-		23,3	100
E	0	19,0	81
F	5	- a)	-
G	10	12,4	53
H	20	15,4	66

a)technical problem

20 Table 4:

Adjuvant	PPG [%]	Fines <150 µm [%]	Fines Relativ [%]
-	0	23,3	100
I	0	17,8	76
J	5	12,0	51
K	10	10,1	43
L	20	8,6	37

Example 4 – Reduced spray drift

An aquous tank mix was prepared by mixing Glyphosate SL2, Dicamba SL, any one of adjuvant samples A-L prepared in Example 1, Mix A, K₂CO₃, and water at room temperature. The spray drift was analyzed as decribed in Example 2. The application rate was 1000 g active/ha for Glyphosate SL1, 560 g active/ha for Dicamba SL, 1,0 l/ha for Mix A, 1000 g/ha K₂CO₃, and 0,1 l/ha of adjuvant sample A-L. The water rate was 100 l/ha.

The results are summarized in Table 5-7. The column “Fines Relative” was calculated in relation to the value of “Fines >150 µm” for the sample without the adjuvant.

Table 5:

Adjuvant	PPG [%]	Fines <150 µm [%]	Fines Relativ [%]
-		25,9	100
A	0	24,0	93
B	5	19,4	75
C	10	17,9	69
D	20	15,2	59

Table 6:

Adjuvant	PPG [%]	Fines <150 µm [%]	Fines Relativ [%]
-		25,9	100
E	0	25,0	97
F	5	23,4	91
G	10	15,7	61
H	20	11,5	45

Table 7:

Adjuvant	PPG [%]	Fines <150 µm [%]	Fines Relativ [%]
-		25,9	100
I	0	23,7	92
J	5	16,1	62
K	10	16,5	64
L	20	15,1	58

Example 5 - Preparation of adjuvants

The adjuvant samples A to L were prepared by mixing the triblock polmyer and the polypropyl-ene glycol as indicated in Table 1 at room temperature.

Table 8: Composition of adjuvant samples

Sample	Triblock polymer	Amount Triblock polymer	Amount PPG
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A	Triblock A	90	10
B	Triblock A	70	30
C	Triblock A	50	50
D	Triblock A	30	70
E	Triblock B	90	10
F	Triblock B	70	30
G	Triblock B	50	50
H	Triblock B	30	70
I	Triblock C	90	10
J	Triblock C	70	30
K	Triblock C	50	50
L	Triblock C	30	70

Example 6 – Reduced spray drift

5 An aqueous tank mix was prepared by mixing Glyphosate SL1, Dicamba SL, any one of adjuvant samples A-L prepared in Example 5, and water at room temperature. The spray drift was analyzed as described in Example 2. The application rate was 1120 g active/ha for Glyphosate SL1, 500 g active/ha for Dicamba SL, and 0,1 l/ha of adjuvant sample A-L. The water rate was 94 l/ha.

10 The results are summarized in Table 9-11. The column “Fines Relative” was calculated in relation to the value of “Fines >150 µm” for the sample without the adjuvant.

Table 9:

Adjuvant	PPG [%]	Fines <150 µm [%]	Fines Relativ [%]
-	0	25,1	100
A	10	17,4	69
B	30	14,0	56
C	50	12,1	48
D	70	11,0	44

15 Table 10:

Adjuvant	PPG [%]	Fines <150 µm [%]	Fines Relativ [%]
-	0	25,1	100
E	10	22,4	89
F	30	14,6	58
G	50	12,3	49
H	70	8,9	35

Table 11:

Adjuvant	PPG [%]	Fines <150 µm [%]	Fines Relativ [%]
-	0	25,1	100
I	10	12,8	51
J	30	10,1	40
K	50	9,7	39
L	70	11,6	46

Example 7 – Reduced spray drift

- 5 An aqueous tank mix was prepared by mixing Glyphosate SL2, Dicamba SL, any one of adjuvant samples A-L prepared in Example 5, Mix A, K₂CO₃, and water at room temperature. The spray drift was analyzed as described in Example 2. The application rate was 1000 g active/ha for Glyphosate SL1, 560 g active/ha for Dicamba SL, 1,0 l/ha for Mix A, 1000 g/ha K₂CO₃, and 0,1 l/ha of adjuvant sample A-L. The water rate was 100 l/ha.

10

The results are summarized in Table 12-14. The column “Fines Relative” was calculated in relation to the value of “Fines >150 µm” for the sample without the adjuvant.

Table 12:

Adjuvant	PPG [%]	Fines <150 µm [%]	Fines Relativ [%]
-	0	26,6	100
A	10	22,5	85
B	30	19,7	74
C	50	17,8	67
D	70	16,3	61

15

Table 13:

Adjuvant	PPG [%]	Fines <150 µm [%]	Fines Relativ [%]
-	0	26,6	100
E	10	a)- technical problem a)	-
F	30	16,6	62
G	50	14,7	55
H	70	15,5	58

a)technical problem

Table 14:

Adjuvant	PPG [%]	Fines <150 µm [%]	Fines Relativ [%]
-	0	26,6	100
I	10	18,7	70

WO 2014/009175

PCT/EP2013/063641

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J	30	19,2	72
K	50	18,4	69
L	70	16,5	62

We claim:

1. A method for preparing a tank mix, which comprises the step of contacting a pesticide formulation, water, and a tank mix adjuvant which comprises a polypropylene glycol and a triblock polymer comprising at least one polyethyleneoxide moiety and at least one polypropyleneoxide moiety.
2. The method according to claim 1, wherein the tank mix adjuvant is essentially free of pesticides.
3. The method according to claims 1 or 2, wherein the polypropylene glycol has an average molecular weight of 200 to 10 000 g/mol.
4. The method according to any of claims 1 to 3, wherein the triblock polymer has an average molecular weight of 500 to 10 000 g/mol.
5. The method according to any of claims 1 to 4, wherein the weight ratio of the triblock polymer to the polypropylene glycol is from 70 : 30 to 15 : 85.
6. The method according to any of claims 1 to 5, wherein the tank mix contains from 0,005 to 2,0 wt% of the tank mix adjuvant.
7. The method according to any of claims 1 to 6, wherein the triblock polymer is a polyethyleneoxide polypropyleneoxide polyethyleneoxide (EO-PO-EO) or a polypropyleneoxide polyethyleneoxide polypropyleneoxide (PO-EO-PO) triblock polymer.
8. The method according to any of claims 1 to 7, wherein the tank mix adjuvant contains at least 5 wt% of the polypropylene glycol and the triblock polymer.
9. The method according to any of claims 1 to 8, wherein the EO-PO-EO triblock polymer contains 5 to 50 mol% of polyethyleneoxide moiety.
10. The method according to any of claims 1 to 9, wherein the polypropyleneoxide moiety in the EO-PO-EO triblock polymer has a molar mass of 800 to 8000 g/mol.
11. A tank mix adjuvant as defined in any of claims 1 to 10 which comprises a polypropylene glycol and a triblock polymer comprising at least one polyethyleneoxide moiety and at least one polypropyleneoxide moiety.
12. A pesticide formulation as defined in any of claims 1 to 10 comprising the tank mix adjuvant as defined in any of claims 1 to 10.

13. The pesticide formulation according to claim 12, wherein a pesticide is present in dissolved or suspended form.
- 5 14. The pesticide formulation according to claim 12 or 13, comprising at least one liquid phase wherein the triblock polymer and the polypropylene glycol are present in the same phase.
- 10 15. A method of controlling phytopathogenic fungi and/or undesired vegetation and/or undesired insect or mite attack and/or for regulating the growth of plants, wherein the tank mix as defined in any of claims 1 to 10 or the pesticide formulation as defined in any of claims 12 to 14 is allowed to act on the respective pests, their environment or the plants to be protected from the respective pest, on the soil and/or on undesired plants and/or the crop plants and/or their environment.
- 15 16. The method according to claim 15, wherein the tank mix is sprayed through a flat fan nozzle.
17. The method according to claim 15 or 16, wherein the tank mix is sprayed through an air induction flat fan nozzle.
- 20 18. A use of the tank mix adjuvant as defined in any of claims 1 to 10 for reducing the wind drift of a pesticide formulation.