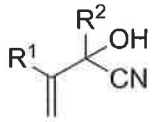
Claims

1. Method for preparing a compound of the formula **(I)**

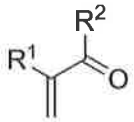


(I)

where R^1 and R^2 are each hydrogen,

comprising the following steps:

(a) reacting at least one compound of the formula **(II)**



(II)

with hydrocyanic acid and at least one base **B** which is selected from the group consisting of ammonia, trialkylamine, ammonium salt, whereby a crude product **CP** comprising **(I)** and hydrocyanic acid is obtained;

b) at least partially removing hydrocyanic acid from the crude product **CP** by subjecting the latter to stripping, whereby a pure product comprising the compound **(I)** is obtained, wherein the pure product has a reduced content of hydrocyanic acid compared to **CP**,

wherein the stripping is carried out at a pressure of 10 - 500 mbar,
wherein a temperature of ≤ 85°C is maintained during the stripping in step b), and
wherein optionally an inert stripping gas is used in countercurrent flow.

2. Method according to Claim 1, wherein step a) is conducted at a temperature of -50°C to 80°C.

3. Method according to Claim 1 or 2, wherein the hydrocyanic acid in step a) is used in an amount of > 1 molar equivalent, based on the amount of all compounds of the formula **(II)** used in step a).

4. Method according to any of Claims 1 to 3, wherein the amount of base **B** in step a) is 0.01 to 5% by weight, based on the sum of the weights of hydrocyanic acid used in step a) and all compounds of the formula **(II)** used in step a).

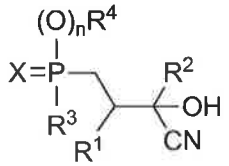
5. Method according to any of Claims 1 to 4, wherein the crude product **CP** is mixed prior to step b) with at least one acid so that after mixing with the acid it has a pH of < 6.9.

6. Method according to Claim 5, wherein the at least one acid has a pKa of ≤ 1.

7. Method according to Claim 5 or 6, wherein the acid is selected from mineral acid, alkylcarboxylic acid, aromatic sulfonic acid.

8. Method according to any of Claims 1 to 7, wherein the crude product **CP** during the stripping in step b) is passed at least partially over a bed of packing elements or over a structured packing.

9. Method for preparing a compound of the formula **(III)**



(III)

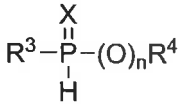
,

where R^1 and R^2 are as defined above,
R^3, R^4 are each independently selected from (halo)alkyl, (halo)aryl, (halo)aralkyl, (halo)cycloalkyl,

X is oxygen or sulfur,

n = 0 or 1;

comprising the steps a) and b) according to any of Claims 1 to 8 and additionally comprising the step c), in which the pure product comprising the compound **(I)** obtained in step b), wherein the pure product has a reduced content of hydrocyanic acid compared to **CP**, is reacted with a compound of the formula **(IV)**.



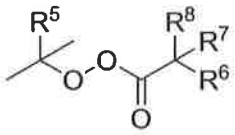
(IV)

10. Method according to Claim 9, wherein the reaction in step c) is conducted at a temperature of 50°C to 105°C.

11. Method according to Claim 9 or 10, where R^3, R^4 are each independently selected from (halo)alkyl having 1 to 12 carbon atoms, (halo)aryl having 6 to 10 carbon atoms, (halo)aralkyl having 7 to 10 carbon atoms, (halo)cycloalkyl having 4 to 10 carbon atoms.

12. Method according to any of Claims 9 to 11, wherein at least one free-radical-forming substance is used in step c).

13. Method according to Claim 12, wherein the free-radical-forming substance is a free-radical initiator of the formula **(V)**



(V)

where R^5 is selected from methyl, ethyl, 2,2-dimethylpropyl, phenyl,
R^6, R^7 are each independently an alkyl group having 1 to 10 carbon atoms,
R^8 is hydrogen or an alkyl group having 1 to 10 carbon atoms.