**CLAIMS**

1.A method for upgrading biomass or substrates at least partly organic and at least partly solid, comprising steps consisting in:

A. introducing (110) a plurality of volumes of fresh substrates (10) into a plurality of respective percolators (20),

B. humidifying (120) the volume of substrates of at least one percolator (20), in order to ensure a hydrolysis of at least one portion of the organic constituents of said volume,

C. injecting (140) the leachate from at least one humidified volume of substrates into an anaerobic digester (30) for producing biogas,

D. sending one portion at least of the liquid from the digester back into at least one percolator for step B, and

E. repeating steps B to D for a determined period,

characterized in that

for step C, all the leachate from said humidified volume of substrates is injected directly into the anaerobic digester (30),

in that beyond a threshold time value, for a volume of substrates of one at least of said percolators, the method further comprises steps consisting in:

F. a step of aerobic fermentation (181) consisting in performing a first phase of composting said volume of substrates in said percolator by aerobic fermentation (181), by stopping the humidification thereof and by airing said percolator, ~~and~~

G. a step of aerobic maturation (182) consisting in performing a second phase of composting said volume of substrates by aerobic maturation (182), by removing said fermented volume of substrates from said percolator (20) and by positioning said volume in an aerobic storage device (50) in order to obtain a stabilized compost, whereof the humidity rate is lower than a maximum threshold value and/or higher than a minimum threshold value, and in that the substrates are not ~~left as is in the percolator, with no prior mechanical~~ grinded~~ing~~ or shak~~i~~en~~g~~ ~~or~~ within the percolator,

H. extracting (150) all or a portion of the liquid from the digester, and

I. oxygenating (160) all or a portion of the extracted liquid before sending it into at least one percolator for the step B.

~~2. The method according to claim 1, further comprising steps consisting in:~~

~~H. extracting (150) all or a portion of the liquid from the digester, and~~

~~I. oxygenating (160) all or a portion of the extracted liquid before sending it into at least one percolator for the step B.~~

2~~3~~. The method according to any one of the preceding claims, further comprising a step consisting in mixing the leachate in the anaerobic digester with other liquid or stodgy organic substrates from other sources with a methanogenic potential.

3~~4~~. The method according to any one of the preceding claims, in which one at least of the volumes of fresh substrates comprises inorganic elements, the method further comprising a step subsequent to the second composting phase (182), for

separating (190) the organic elements from the inorganic elements.

4~~5~~. The method according to any one of the preceding claims, comprising a step consisting in introducing a new volume of fresh substrates into the percolator (20) whereof the volume of substrates has been removed for the aerobic maturation step (182).

5~~6~~. The method according to any one of the preceding claims, comprising a step (100) prior to the introduction step and consisting in making the organic matter accessible to the liquid used for the humidification step.

6~~7~~. The method according to any one of the preceding claims, further comprising a step (130) of detecting methane and/or hydrogen sulphide in a percolator (20), possibly paired with the step of airing said percolator during the first composting phase.

7~~8~~. The method according to any one of the preceding claims, further comprising a step (170) of chemically analyzing the leachate and/or the liquid used for the humidification step.

8~~9~~. The method according to claim 8, in which the aerobic fermentation step (181) is linked to the analysis step (170).

9~~10~~. The method according to any one of the preceding claims, further comprising a step of measuring the temperature of the substrates in a percolator (20),

the step of aerobic maturation (182) being linked to the results of the temperature measuring step at least during the aerobic fermentation step (181).

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1.A method for upgrading biomass or substrates at least partly organic and at least partly solid, comprising steps consisting in:

A. introducing (110) a plurality of volumes of fresh substrates (10) into a plurality of respective percolators (20),

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C. injecting (140) the leachate from at least one humidified volume of substrates into an anaerobic digester (30) for producing biogas,

D. sending one portion at least of the liquid from the digester back into at least one percolator for step B, and

E. repeating steps B to D for a determined period,

characterized in that

for step C, all the leachate from said humidified volume of substrates is injected directly into the anaerobic digester (30),

in that beyond a threshold time value, for a volume of substrates of one at least of said percolators, the method further comprises steps consisting in:

F. a step of aerobic fermentation (181) consisting in performing a first phase of composting said volume of substrates in said percolator by aerobic fermentation (181), by stopping the humidification thereof and by airing said percolator, and

G. a step of aerobic maturation (182) consisting in performing a second phase of composting said volume of substrates by aerobic maturation (182), by removing said fermented volume of substrates from said percolator (20) and by positioning said volume in an aerobic storage device (50) in order to obtain a stabilized compost, whereof the humidity rate is lower than a maximum threshold value and/or higher than a minimum threshold value, and in that the substrates are left as is in the percolator, with no prior mechanical grinding or shaking or in the percolator,

2. The method according to claim 1, further comprising steps consisting in:

H. extracting (150) all or a portion of the liquid from the digester, and

I. oxygenating (160) all or a portion of the extracted liquid before sending it into at least one percolator for the step B.

3. The method according to any one of the preceding claims, further comprising a step consisting in mixing the leachate in the anaerobic digester with other liquid or stodgy organic substrates from other sources with a methanogenic potential.

4. The method according to any one of the preceding claims, in which one at least of the volumes of fresh substrates comprises inorganic elements, the method further comprising a step subsequent to the second composting phase (182), for separating (190) the organic elements from the inorganic elements.

5. The method according to any one of the preceding claims, comprising a step consisting in introducing a new volume of fresh substrates into the percolator (20) whereof the volume

of substrates has been removed for the aerobic maturation step (182).

6. The method according to any one of the preceding claims, comprising a step (100) prior to the introduction step and consisting in making the organic matter accessible to the liquid used for the humidification step.

7. The method according to any one of the preceding claims, further comprising a step (130) of detecting methane and/or hydrogen sulphide in a percolator (20), possibly paired with the step of airing said percolator during the first composting phase.

8. The method according to any one of the preceding claims, further comprising a step (170) of chemically analyzing the leachate and/or the liquid used for the humidification step.

9. The method according to claim 8, in which the aerobic fermentation step (181) is linked to the analysis step (170).

10. The method according to any one of the preceding claims, further comprising a step of measuring the temperature of the substrates in a percolator (20),

the step of aerobic maturation (182) being linked to the results of the temperature measuring step at least during the aerobic fermentation step (181).

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for step C, all the leachate from said humidified volume of substrates is injected directly into the anaerobic digester (30),

in that beyond a threshold time value, for a volume of substrates of one at least of said percolators, the method further comprises steps consisting in:

F. a step of aerobic fermentation (181) consisting in performing a first phase of composting said volume of substrates in said percolator by aerobic fermentation (181), by stopping the humidification thereof and by airing said percolator,

G. a step of aerobic maturation (182) consisting in performing a second phase of composting said volume of substrates by aerobic maturation (182), by removing said fermented volume of substrates from said percolator (20) and by positioning said volume in an aerobic storage device (50) in order to obtain a stabilized compost, whereof the humidity rate is lower than a maximum threshold value and/or higher than a minimum threshold value, and in that the substrates are not grinded or shaken within the percolator,

H. extracting (150) all or a portion of the liquid from the digester, and

I. oxygenating (160) all or a portion of the extracted liquid before sending it into at least one percolator for the step B.

2. The method according to any one of the preceding claims, further comprising a step consisting in mixing the leachate in the anaerobic digester with other liquid or stodgy organic substrates from other sources with a methanogenic potential.

3. The method according to any one of the preceding claims, in which one at least of the volumes of fresh substrates comprises inorganic elements, the method further comprising a step subsequent to the second composting phase (182), for separating (190) the organic elements from the inorganic elements.

4. The method according to any one of the preceding claims, comprising a step consisting in introducing a new volume of fresh substrates into the percolator (20) whereof the volume of substrates has been removed for the aerobic maturation step (182).

5. The method according to any one of the preceding claims, comprising a step (100) prior to the introduction step and consisting in making the organic matter accessible to the liquid used for the humidification step.

6. The method according to any one of the preceding claims, further comprising a step (130) of detecting methane and/or hydrogen sulphide in a percolator (20), possibly paired with the step of airing said percolator during the first composting phase.

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8. The method according to claim 8, in which the aerobic fermentation step (181) is linked to the analysis step (170).

9. The method according to any one of the preceding claims, further comprising a step of measuring the temperature of the substrates in a percolator (20),

the step of aerobic maturation (182) being linked to the results of the temperature measuring step at least during the aerobic fermentation step (181).