CLAIMS

1.- System (18) for treating waste water containing at least one cosmetic product, the system (18) being able to be placed in an application space (12) for applying a cosmetic product on a user, the system (18) comprising:

- a tank (36) for holding and separating the waste water;

- an inlet (38) for moving untreated waste water into the holding tank (36);

- a bubble generator (32), able to introduce a quantity of bubbles into the waste water of the holding tank (36), in order to form, in a lower region (50) of the holding tank (36), a treated water and, in an upper region (52) of the holding tank (36), a supernatant;

- a lower outlet (40) for recovering treated water from the holding tank (36);

- an upper outlet (42) for discharging a foamy supernatant from the holding tank (36);

the system (18) being devoid of means for injecting a compound for flocculating and/or coagulating the waste water, at least upstream from the holding tank (36).

2.- System (18) according to claim 1, wherein the bubble generator (32) comprises an upstream pipe (62) for sampling a relatively bubble-free water in the holding tank (36), and a downstream pipe (64) for injecting water relatively rich in bubbles into the holding tank (36).

3.- System (18) according to claim 2, wherein the bubble generator (32) comprises an air inlet (66) and a water pump (60), capable of mixing air taken through the air inlet (66) with the relatively bubble-free water coming from the upstream pipe (62) to form the water relatively rich in bubbles to be conveyed by the downstream pipe (64).

4.- System (18) according to any one of the previous claims, comprising a trap (70) for collecting the foamy supernatant, connected to the upper discharge outlet (42), the collection trap (70) being connected to a vacuum source (74), able to generate a pressure in the collection trap (70) lower than the pressure prevailing in the holding tank (36).

5.- System (18) according to claim 4, wherein the bubble generator (32) comprises the vacuum source (74).

6.- System (18) according to claim 5, taken in combination with claim 3, wherein the vacuum source (74) is formed by the water pump (60), with the air inlet (66) being connected to the collection trap (70).

7.- System (18) according to any one of claims 4 to 6, comprising an intermediate receptacle (76) for protection, interposed between the collection trap (70) and the vacuum source (74).

8.- System (18) according to any one of the previous claims, wherein the inner volume of the holding tank (36) is less than 100 liters.

9.- System (18) according to any one of the previous claims, wherein the bubble generator (32) is able to generate bubble of an average size less than 0.5 mm.

10.- Arrangement (10; 110) for applying cosmetic product on a user, including:

- a source (14) of rinse water for the cosmetic product

- an open receptacle (16) for collecting waste water formed from the rinse water and containing the cosmetic product;

- a system (18) according to any one of the previous claims, with the inlet (38) connected to the open receptacle (16).

11.- Arrangement (10;110) according to claim 10, wherein a bottom of the open receptacle (16) is arranged at a height greater than a bottom (44) of the holding tank (36) in order to allow for the flow via gravity of the waste water collected in the open receptacle (16) to the holding tank (36);

12.- Arrangement (10; 110) according to any of claims 10 or 11, comprising a seat (13), able to receive a user, with the seat (13) being placed in the vicinity of the open receptacle (16) and/or of the waste water treatment system (18).

13.- Method for treating waste water containing at least one cosmetic product, comprising the following steps:

- supplying, in an application space (12) of the cosmetic product on a user, a system (18) according to any of claims 1 to 9;

- conveying waste water containing at least one cosmetic product in the holding tank (36) though the inlet (38);

- introducing a quantity of air bubbles into the waste water, through the intermediary of the bubble generator (32);

- forming of treated water in an lower region (50) of the holding tank (36) and of a supernatant in an upper region (52) of the holding tank (36);

- recovering treated water via the lower sampling outlet (40);

- discharging the supernatant by the upper discharge outlet (42);

the method being devoid of a step of injecting a compound for flocculating and/or coagulating the waste water, at least upstream of its passage into the holding tank (36).

14. Method according to claim 13, comprising a step of collecting the supernatant in a collection trap (70) connected to the upper discharge outlet (42), with the step of collecting comprising the application of pressure in the collection trap (70) that is lower than the pressure prevailing in the holding tank (36) by a vacuum source (74).

15.- Method according to claim 14, wherein the step of introducing a quantity of bubbles into the waste water comprises the sampling of relatively bubble-free water in the holding tank (36), and the introducing of relatively bubble-free water into a water pump (60), with an air inlet (66) of the water pump (60) being connected to the collection trap (70), with air sampled in the collection trap (70) in order to reduce the pressure in the collection trap (70), with the air sampled in the collection trap (70) being injected into the relatively bubble-free water through the air inlet (66) in order to form relatively bubble-rich water.

CLAIMS

1.- System (18) for treating waste water containing at least one cosmetic product, the system (18) being able to be placed in an application space (12) for applying a cosmetic product on a user, the system (18) comprising:

- a tank (36) for holding and separating the waste water;

- an inlet (38) for moving untreated waste water into the holding tank (36);

- a bubble generator (32), able to introduce a quantity of bubbles into the waste water of the holding tank (36), in order to form, in a lower region (50) of the holding tank (36), a treated water and, in an upper region (52) of the holding tank (36), a supernatant;

- a lower outlet (40) for recovering treated water from the holding tank (36);

- an upper outlet (42) for discharging a foamy supernatant from the holding tank (36);

- a trap (70) for collecting the foamy supernatant, connected to the upper discharge outlet (42), the collection trap (70) being connected to a vacuum source (74), able to generate a pressure in the collection trap (70) lower than the pressure prevailing in the holding tank (36), the bubble generator (32) comprising the vacuum source (74);

the system (18) being devoid of means for injecting a compound for flocculating and/or coagulating the waste water, at least upstream from the holding tank (36).

2.- System (18) according to claim 1, wherein the bubble generator (32) comprises an upstream pipe (62) for sampling a relatively bubble-free water in the holding tank (36), and a downstream pipe (64) for injecting water relatively rich in bubbles into the holding tank (36).

3.- System (18) according to claim 2, wherein the bubble generator (32) comprises an air inlet (66) and a water pump (60), capable of mixing air taken through the air inlet (66) with the relatively bubble-free water coming from the upstream pipe (62) to form the water relatively rich in bubbles to be conveyed by the downstream pipe (64).

4.- System (18) according to claim 3, wherein the vacuum source (74) is formed by the water pump (60), with the air inlet (66) being connected to the collection trap (70).

5.- System (18) according to any one of the previous claims, comprising an intermediate receptacle (76) for protection, interposed between the collection trap (70) and the vacuum source (74).

6.- System (18) according to any one of the previous claims, wherein the inner volume of the holding tank (36) is less than 100 liters.

7.- System (18) according to any one of the previous claims, wherein the bubble generator (32) is able to generate bubble of an average size less than 0.5 mm.

8.- Arrangement (10; 110) for applying cosmetic product on a user, including:

- a source (14) of rinse water for the cosmetic product
- an open receptacle (16) for collecting waste water formed from the rinse water and containing the cosmetic product;
- a system (18) according to any one of the previous claims, with the inlet (38) connected to the open receptacle (16).

9.- Arrangement (10;110) according to claim 8, wherein a bottom of the open receptacle (16) is arranged at a height greater than a bottom (44) of the holding tank (36) in order to allow for the flow via gravity of the waste water collected in the open receptacle (16) to the holding tank (36);

10.- Arrangement (10; 110) according to any of claims 8 or 9, comprising a seat (13), able to receive a user, with the seat (13) being placed in the vicinity of the open receptacle (16) and/or of the waste water treatment system (18).

11.- Method for treating waste water containing at least one cosmetic product, comprising the following steps:

- supplying, in an application space (12) of the cosmetic product on a user, a system (18) according to any of claims 1 to 7;
- conveying waste water containing at least one cosmetic product in the holding tank (36) though the inlet (38);
- introducing a quantity of air bubbles into the waste water, through the intermediary of the bubble generator (32);
- forming of treated water in an lower region (50) of the holding tank (36) and of a supernatant in an upper region (52) of the holding tank (36);
- recovering treated water via the lower sampling outlet (40);
- discharging the supernatant by the upper discharge outlet (42);

the method being devoid of a step of injecting a compound for flocculating and/or coagulating the waste water, at least upstream of its passage into the holding tank (36).

12. Method according to claim 11, comprising a step of collecting the supernatant in a collection trap (70) connected to the upper discharge outlet (42), with the step of collecting comprising the application of pressure in the collection trap (70) that is lower than the pressure prevailing in the holding tank (36) by a vacuum source (74).

13.- Method according to claim 12, wherein the step of introducing a quantity of bubbles into the waste water comprises the sampling of relatively bubble-free water in the holding tank (36), and the introducing of relatively bubble-free water into a water pump

(60), with an air inlet (66) of the water pump (60) being connected to the collection trap (70), with air sampled in the collection trap (70) in order to reduce the pressure in the collection trap (70), with the air sampled in the collection trap (70) being injected into the relatively bubble-free water through the air inlet (66) in order to form relatively bubble-rich water.