CLAIMS

1. Fragrance ingredient spatial recognisability prediction method (200, 300, 400, 500, 1000) to prepare a fragrance composition comprising said fragrance ingredient, comprising the steps of:

- selecting (205, 305, 410, 1005), upon a computer interface, a measurable value representative of between one and two of the following parameters:
  - a minimum sensory intensity level, corresponding to a predetermined minimum psychophysical intensity for the ingredient,
  - a maximum distance, corresponding to a distance at which the ingredient is to be perceived at a minimum predetermined psychophysical intensity level, or
  - a quantity of the ingredient in liquid phase,

wherein the selected value is selected within a range of at least two distinct values,

- computing (215, 315, 1020), by a computing system, a value representative of either one of the following parameters:
  - a minimum sensory intensity level, corresponding to a predetermined minimum psychophysical intensity for the ingredient,
  - a maximum distance, corresponding to a distance at which the ingredient is to be perceived at a minimum sensory intensity level selected or set by default, or
  - a quantity of the ingredient in liquid phase and

wherein the computed value is representative of a parameter other than the parameter associated with the selected value and wherein a value for the parameter neither selected nor computed is set to a default value, said computed value being computed as a function of the parameter associated with the selected value and the value for the parameter neither selected nor computed, the ingredient being represented by an ingredient digital identifier corresponding to a physical ingredient to be used within a fragrance composition to be prepared as a function of the computed and selected values.

2. Fragrance ingredient spatial recognisability prediction method (200) according to claim 1, comprising the steps of:

- selecting (205), upon a computer interface, a value representative of a minimum requested sensory intensity level, corresponding to a desirable predetermined perceived minimum psychophysical intensity for the ingredient, said value being selected within a range of at least two distinct values,
- determining (240), by a computing system, a value representative of a minimum gas phase concentration of the ingredient corresponding to the selected minimum sensory intensity level as a function of a dose-response curve linking gas phase concentration to the selected minimum sensory intensity,
- calculating (210), by a computing system, a maximum total acceptable ingredient dilution, for both in gas and liquid phases of the fragrance, as a function of the determined minimum gas phase concentration and
- computing (215), by a computing system, at least one value representative of a distance from the fragrance source, up to a maximum distance from the fragrance source, at which the ingredient presents at least the minimum sensory intensity level selected as a function of the maximum total ingredient dilution calculated, said computing step comprising a step of retrieving (220), from an electronic storage, at least one value representative of the minimum spatial dilution for an ingredient in the gas phase corresponding to a predetermined downstream distance from the fragrance source.

3. Method (200) according to claim 2, which further comprises, prior to the step of retrieving (220), a step of constructing (225) a minimum spatial dilution electronic storage, said step of constructing matching minimum spatial dilution values to at least one distance from a fragrance source value and at least one of the following indicators:

- an indicator representative of an incoming air flow velocity incident upon the fragrance source comprising said ingredient,
- an indicator representative of an ingredient or fragrance composition application surface area,
- an indicator representative of simulation parameters for the shape of a human body and/or
- an indicator representative of area location on a human body upon which the ingredient or fragrance composition is applied,

said step of constructing comprising a step of computational fluid dynamics simulation (230) configured to calculate said spatial dilution values at predetermined downstream distances from the source.

4. Method (200) according to any one of claims 2 to 3, which further comprises a step of setting (245) a value representative of a duration of dry down of an ingredient, the step of computing (215) of a value representative of a distance from the fragrance source being achieved as a function of the duration of dry down set.

5. Fragrance ingredient spatial recognisability prediction method (300) according to claim 1, comprising the steps of:

- selecting (305), upon a computer interface, a value representative of a distance within a range of at least two distinct values and up to a maximum downstream distance from the fragrance source at which the ingredient presents a minimum sensory intensity level corresponding to a predetermined minimum psychophysical intensity for the ingredient,
- retrieving (310), from an electronic storage, a minimum spatial dilution value associated with the selected distance,
- determining (340), by a computing system, a value representative of gas phase concentration of the ingredient corresponding to the spatial dilution value retrieved and
- computing (315), by a computing system, for the selected value of distance, at least one value representative of a sensory intensity level as a function of a dose-response curve linking gas phase concentration to sensory intensity level.

6. Fragrance ingredient spatial recognisability prediction method (1000) according to claim 1, comprising the steps of:

- selecting (1005), upon a computer interface, a value representative of a minimum sensory intensity level to be achieved, corresponding to a predetermined minimum psychophysical intensity for the ingredient,
- selecting (1006), upon a computer interface, a value representative of a downstream distance from a fragrance source,
- determining (1010), by a computing system, a value representative of the gas phase concentration of the ingredient corresponding to the selected minimum

sensory intensity level as a function of a dose response for said ingredient linking gas phase concentration to the selected minimum sensory intensity,

- retrieving (1011), from an electronic storage, a value of minimum spatial dilution as a function of the selected distance from the fragrance source,
- calculating (1015), by a computing system, at least one value representative of maximum total ingredient dilution as a function of the determined gas phase concentration for said ingredient and
- computing (1020), by a computing system, for at least one value representative of maximum total ingredient dilution calculated and at least one value representative of minimum spatial dilution retrieved for the selected distance, at least one value representative of a quantity of ingredient in liquid phase, so that the ingredient presents the minimum sensory intensity level as a function of the value of ingredient dilution at the predetermined distance.

7. Fragrance composition spatial recognisability prediction method (400) according to claim 1, comprising the steps of:

- electing (405), upon a computer interface, at least two ingredient digital identifiers to form a fragrance source,
- setting (410), upon a computer interface, a value representative of a relative quantity of at least two ingredients identified by said digital identifier,
- selecting (205), upon a computer interface, a value representative of a minimum requested sensory intensity level, corresponding to a desirable predetermined perceived minimum psychophysical intensity for said at least two ingredients, said value being selected within a range of at least two distinct values,
- determining (240), by a computing system, a value representative of a minimum gas phase concentration for each said at least two ingredients corresponding to the selected minimum sensory intensity level as a function of a dose-response curve linking gas phase concentration to the selected minimum sensory intensity,
- calculating (210), by a computing system, a maximum total ingredient dilution, for both in gas and liquid phases of the fragrance, as a function of the determined minimum gas phase concentration, for each said at least two ingredients and

- computing (215), by a computing system, for each said at least two ingredients, at least one value representative of a distance from the fragrance source, up to a maximum distance from the fragrance source, at which said ingredient presents at least the minimum sensory intensity level selected as a function of the maximum total ingredient dilution calculated.

8. Method (400) according to claim 7, in which at least one ingredient digital identifier is associated, in a computer memory, to a descriptor representative of the scent of the corresponding ingredient, wherein the method further comprises a step of providing (415), upon a computer interface, at least one alternative ingredient digital identifier to at least one of the elected ingredient digital identifiers as a function of at least one descriptor associated to said elected ingredient digital identifier.

9. Method (400) according to claim 8, in which the step of providing (415) is achieved as a function of both at least one descriptor associated to said elected ingredient digital identifier and the computed value representative of a maximum downstream spatial distance for said ingredient digital identifier.

10. Fragrance composition spatial recognisability prediction method (500) comprising a fragrance ingredient spatial recognisability prediction method (400) according to claim 1, and further comprising the steps of:

- electing (405), upon a computer interface, at least two ingredient digital identifiers forming a fragrance source,
- setting (410), upon a computer interface, a value representative of a relative quantity of at least one said ingredient identified by said digital identifier,
- selecting (305), upon a computer interface, a value representative of a distance within a range of at least two distinct values and up to a maximum downstream distance from the fragrance source at which at least one ingredient presents a minimum sensory intensity level corresponding to a predetermined minimum psychophysical intensity for each said ingredient,
- retrieving (310), from an electronic storage, a minimum spatial dilution value associated with the selected distance,

- determining (340), by a computing system, a value representative of gas phase concentration of at least one said ingredient corresponding to the spatial dilution value retrieved and
- computing (315), by a computing system, for the selected value of distance, at least one value representative of a sensory intensity level as a function of a dose-response curve linking gas phase concentration to sensory intensity level.

11. Fragrance (1300) composition preparation method, characterised in that it comprises:

- a step (1305) of selecting, upon a computer interface, at least one ingredient digital identifier to form a fragrance composition digital representation,
- a step (1310) of predicting, by a computing device, a spatial recognisability for at least one selected ingredient digital identifier according to a fragrance composition spatial recognisability prediction method according to any one of claims 1 to 10 and
- a step (1315) of preparing a fragrance composition as a function of the fragrance composition digital representation.