A further subject-matter of the invention is an extraction device with the features of claim 19, by way of which the advantages mentioned above can accordingly be achieved. Preferred embodiments of the extraction device have already been explained above by way of the system according to the invention.

Yet a further subject-matter of the invention is a method with the features of claim 20, by way of which the advantages mentioned above can likewise be achieved.

The invention is hereinafter described purely by way of example and by way of a possible embodiment with reference to the attached drawings. There are shown in:

Fig. 1a, b sections through a brewing module of an extraction appliance according to the invention, with a portion capsule which is received therein, before carrying out a brewing process, and specifically (a) in a plane running through the middle point of the portion capsule and (b) in a plane which is parallel to this but which lies further to the outside;

Fig. 2a-c different views of an arrangement of extraction spikes of an extraction device of the brewing module of Fig. 1; and

Fig. 3a, b the sections of Fig. 1, after carrying out a brewing procedure.

A brewing module of an extraction appliance, in the present embodiment example of a coffee machine, is represented in Fig. 1, wherein a portion capsule 10 comprising an extraction material, here a coffee powder, is received in the brewing module.

The portion capsule 10 has an at least approximately cubic basic shape and comprises six capsule walls 12 which are formed of a plastic material, here polypropylene, and in each case have a wall thickness in the range of 0.1 mm to 0.7 mm. The individual capsule walls 12 are at least approximately planar, before insertion of the portion capsule 10 into the brewing module. The capsule walls 12 are easily deformed under pressure due to their low wall thickness and their design from plastic material.

The brewing module comprises an injection device 14 for introducing hot brewing fluid into the portion capsule 10, as well as an extraction device 16 for the discharge of an extraction product out of the portion capsule 10 during a brewing procedure. The injection device 14 and the extraction device 16 between them form a receiving space 18 for the portion capsule 10. The brewing model can be opened, and the injection device 14 and the extraction device 16 can move

Patent claims

1. A system for preparing a brewed product with a portion capsule comprising an extraction material and with an extraction appliance for preparing the brewed product from the extraction material contained in the portion capsule, wherein the extraction appliance comprises an injection device for introducing a brewing fluid into the portion capsule and an extraction device for discharging an extraction product out of the portion capsule, wherein the injection device and the extraction device between them define a receiving space for the portion capsule and can be moved apart in a relative manner for inserting the portion capsule into the receiving space and can be moved to one another in a relative manner for fixing the portion capsule,
wherein the extraction device comprises a pressing means, by way of which a wall of the portion capsule inserted into the receiving space, said wall facing the extraction device, can be pressed in in the direction of the capsule interior, for compacting the extraction material contained in the portion capsule, before the injection device introduces brewing fluid into the portion capsule, wherein the pressing means comprises at least one extraction spike of the extraction device.

2. A system according to claim 1, wherein the pressing means is a passive component which presses in the wall of the portion capsule, when the injection device and the extraction device are moved to one another for fixing the portion capsule.

3. A system according to claim 1 or 2, wherein the extraction spike has a pyramid-like or cone-like basic shape and comprises a lateral surface which extends from a base element to a tip of the extraction spike which faces the injection device.

4. A system according to any one of the preceding claims, wherein the extraction spike comprises a widening.

5. A system according to claim 4, wherein the extraction spike comprises a shoulder, in the region of its tip

6. A system according to claim 3, wherein the extraction spike comprises at least one projecting rib which extends from the base element along the lateral surface in the direction of the tip.

7. A system according to claim 6, wherein at least three projecting ribs are arranged in a uniformly distributed manner around the lateral surface

8. A system according to claim 6 or 7, wherein the rib or each rib ends at a distance to the tip

9. A system according to any one of claim 6 to 8, wherein a passage opening is provided in the base element, in the region of the rib or each rib.

10. A system according to claim 9, wherein the passage opening is provided in the base element, in the region of the rib or each rib each case on both sides of the rib.

11. A system according to any one of the claims 6 to 10, wherein a channel which runs out into a passage opening runs along the rib.

12. A system according to claim 11, wherein the channel running out into a passage opening runs on both sides of the rib.

13. A system according to any one of the preceding claims, wherein the pressing means comprises five extraction spikes.

14. A system according to claim 13, wherein four extraction spikes are arranged in the corners of a square, and a fifth extraction spike is arranged in the centre of the square.

15. A system according to claim 13 or 14, wherein the diagonals of the square which is spanned by the extraction spikes are shorter than a maximal diagonal or a maximal diameter of the wall of the portion capsule which faces the extraction device.

16. A system according to any one of the preceding claims, wherein the portion capsule has an essentially cubic or cuboid basic shape.

17. A system according to any one of the preceding claims, wherein at least the wall of the portion capsule which faces the extraction device is formed from a plastic material.

18. A system according to claim 17, wherein all walls of the portion capsule are formed from one and the same plastic material.

19. An extraction appliance for preparing a brewed product from an extraction material contained in a portion capsule, comprising an injection device for introducing a brewing fluid into the portion capsule, and an extraction device for discharging an extraction product out of the portion capsule, wherein the injection device and the extraction device between them define a receiving space for the portion capsule and can be moved apart in a relative manner for inserting

the portion capsule into the receiving space and can be moved to one another in a relative manner for fixing the portion capsule,
wherein
the extraction device comprises a pressing means, by way of which a wall of the portion capsule inserted into the receiving space, said wall facing the extraction device, can be pressed in in the direction of the capsule interior, for compacting the extraction material contained in the portion capsule, before the injection device introduces brewing fluid into the portion capsule, wherein the pressing means comprises at least one extraction spike of the extraction device.

20. A method for preparing a brewed product from an extraction material, with which a portion capsule containing the extraction material is inserted into a receiving space of an extraction appliance, said receiving space being defined between an injection device and an extraction device,
wherein a wall of the portion capsule inserted into the receiving space, said wall facing the extraction device, is pressed in in the direction of the capsule interior by way of at least one extraction spike of the extraction device, for compacting the extraction material contained in the portion capsule, before brewing fluid is introduced into the portion capsule by way of the injection device.