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HOSOKAWA et al.(10) **Pub. No.: US 2022/0353960 A1**(43) **Pub. Date: Nov. 3, 2022**(54) **MICROWAVE TREATMENT DEVICE****Publication Classification**(71) Applicant: **Panasonic Intellectual Property Management Co., Ltd., Osaka (JP)**(72) Inventors: **DAISUKE HOSOKAWA**, Shiga (JP);
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FUMITAKA OGASAWARA, Hyogo (JP)(51) **Int. Cl.**
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A microwave treatment device comprises: a heating chamber that accommodates a heating target, a microwave generator that generates a microwave; a feeding unit that supplies the microwave to the heating chamber; a reflected microwave power detector that detects a reflected microwave power returned to the microwave generator; a controller that controls the microwave generator; and a storage unit. The storage unit stores a level of the reflected microwave power detected by the reflected microwave power detector together with a frequency of the microwave supplied to the heating chamber and an elapsed time after a start of heating the heating target. The controller causes the microwave generator to execute a frequency sweep over a specified frequency band and determines that the heating target is in a boiling state based on a temporal change in a value that is obtained based on the reflected microwave power at each frequency.

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