CLAIMS

1. An electrically operated aerosol generating system for receiving an aerosol-forming substrate, the system comprising:

a liquid storage portion for storing liquid aerosol-forming substrate;

an electric heater comprising at least one heating element for heating the liquid aerosol-forming substrate; and

electric circuitry configured to determine depletion of liquid aerosol-forming substrate based on a relationship between a power applied to the heating element and a resulting temperature change of the heating element.

2. An electrically operated aerosol generating system according to claim 1, wherein the electric circuitry is configured to estimate an amount of liquid aerosol-forming substrate in the liquid storage portion based on the determined depletion.

3. An electrically operated aerosol generating system according to claim 1 or 2, further comprising a temperature sensor for measuring the temperature of the at least one heating element and wherein the electric circuitry is arranged to monitor the temperature of the at least one heating element as sensed by the temperature sensor and determine depletion of liquid aerosol-forming substrate heated by the heater based on the temperature as sensed by the temperature sensor.

4. An electrically operated aerosol generating system according to any preceding claim, wherein the electric circuitry is arranged to apply a predetermined power to the heating element.

5. An electrically operated aerosol generating system according to any preceding claim, wherein the electric circuitry is arranged to measure the electrical resistance of the at least one heating element, to ascertain the temperature of the heating element from the measured electrical resistance.

6. An electrically operated aerosol generating system according to claim 5, wherein the electric circuitry is arranged to measure the electrical resistance of

the at least one heating element by measuring the current through the at least one heating element and the voltage across the at least one heating element and determining the electrical resistance of the at least one heating element from the measured current and voltage.

7. An electrically operated aerosol generating system according to any preceding claim, wherein the electric circuitry is arranged to determine depletion of liquid aerosol-forming substrate heated by the heater by monitoring an increase of the sensed or ascertained temperature over successive heating cycles as the liquid aerosol-forming substrate in the liquid storage portion is consumed.

8. An electrically operated aerosol generating system according to any preceding claim, wherein the electric circuitry is arranged to determine depletion of liquid aerosol-forming substrate heated by the heater by monitoring the rate of increase of the sensed or ascertained temperature over a portion of each heating cycle, over successive heating cycles as the liquid aerosol-forming substrate in the liquid storage portion is consumed.

9. An electrically operated aerosol generating system according to any preceding claim, wherein the electric circuitry is arranged to determine depletion of liquid aerosol-forming substrate heated by the heater by monitoring an increase in the value of an integral over time of the sensed or ascertained temperature over a portion of each heating cycle, over successive heating cycles as the liquid aerosol-forming substrate in the liquid storage portion is consumed.

10. An electrically operated aerosol generating system according to claim 1, wherein the electric circuitry is arranged to limit the temperature of the heating element to a maximum temperature, and is arranged to determine depletion of aerosol-forming substrate heated by the heater by monitoring an amount of power applied to the heating element to maintain the maximum temperature.

11. An electrically operated aerosol generating system according to any preceding claim, further comprising a capillary wick for conveying the liquid aerosol-forming substrate from the liquid storage portion to the electric heater.

12. A method comprising:

providing an electrically operated aerosol generating system comprising a liquid storage portion for storing liquid aerosol-forming substrate and an electric heater comprising at least one heating element for heating the liquid aerosol-forming substrate; and

determining depletion of liquid aerosol-forming substrate heated by the heater based on a relationship between a power applied to the heating element and a resulting temperature change of the heating element.

13. Electric circuitry for an electrically operated aerosol generating system comprising a liquid storage portion for storing liquid aerosol-forming substrate and an electric heater comprising at least one heating element for heating the liquid aerosol-forming substrate, the electric circuitry being arranged to perform ~~the method of claim 12~~at least the following:

determining depletion of liquid aerosol-forming substrate heated by the heater based on a relationship between a power applied to the heating element and a resulting temperature change of the heating element.

14. A computer program which, when run on programmable electric circuitry for an electrically operated aerosol generating system comprising a liquid storage portion for storing liquid aerosol-forming substrate and an electric heater comprising at least one heating element for heating the liquid aerosol-forming substrate, causes the programmable electric circuitry to perform at least the following:

determining depletion of liquid aerosol-forming substrate heated by the heater based on a relationship between a power applied to the heating element and a resulting temperature change of the heating element.~~the method of any of claim 12.~~

15. A computer readable storage medium for running on programmable electric circuitry for an electrically operated aerosol generating system

comprising a liquid storage portion for storing liquid aerosol-forming substrate and an electric heater comprising at least one heating element for heating the liquid aerosol-forming substrate, the computer readable storage medium having stored thereon a computer program that causes the programmable electric circuitry to perform at least the following:

determining depletion of liquid aerosol-forming substrate heated by the heater based on a relationship between a power applied to the heating element and a resulting temperature change of the heating element~~according to claim 14~~.