a liquid effluent for ionization by electrospray ionization, atmospheric pressure chemical ionization or atmospheric pressure photoionization, or

a means of assisting in vaporizing the analyte introduced using the ATD by means of resistive or radiative heating.

2. The ionization source of claim **1**, wherein the enclosure further comprises a port for introducing a reactive gas and a vent for venting excess reactive gas from the enclosure, the port for introducing the reactive gas may be the same as the port used to introduce the liquid effluent and the reactive gas may be generated by vaporization of a liquid introduced through said port.

3. The ionization source of claim **1**, wherein the port for introducing the heated gas also comprises a heater for heating the gas.

4. The ionization source of claim **1**, wherein the resistive heater for vaporizing the sample is also the wire, ribbon, or belt of the ATD.

5. The ionization source of claim **1**, wherein the ionization arrangement for generating an electric discharge comprises a sharp-edged or pointed electrode onto which a high voltage is applied to generate an electric gaseous discharge.

6. The ionization source of claim **1**, wherein the ionization arrangement for generating UV radiation comprises a UV lamp or laser.

7. The ionization source of claim **1**, further comprising a flange for accepting an ATD such that the ATD inserts a high temperature tolerant member in the form of a wire, ribbon, or belt into the ionization region, aligned so that heated gas from another probe device, typically the commercial ESI or APCI probe, strikes the member at the position in which the sample is held and within or near the ionization region and near the mass spectrometer entrance aperture, thus assisting in vaporizing compounds that comprise the sample.

8. The device of claim **7** incorporates a moving wire, ribbon, or belt to allow the sample to be moved into and out of the heated gas stream.

9. The device of claim **7**, where the materials of construction are metal.

10. The device of claim **7**, where the material of construction of the heat tolerant member is metal, glass, ceramic, or a heat tolerant polymer such as Kapton®.

11. The device of claim **7**, where the sample positioned on the high temperature tolerant material moves within 10 cm and preferably within 2 cm of the ion entrance aperture.

12. The device of claim **7**, where the exit for the source of heated gas used to vaporize the sample is within 10 cm and preferably within 2 cm of the wire, ribbon, or belt of the ATD and thus of the sample as it moves within the ionization region.

13. The device of claim **7**, where the flange is made to fit an unused flange port of a commercial atmospheric pressure ion source, typically a port reserved for a photoionization lamp.

14. The device of claim **7**, where the heat tolerant material is moved by a stepper motor or other similar device so that analyte introduced on the heat tolerant material is transported at a known rate into the atmospheric pressure ion source housing and into the stream of heated gas to effect vaporization of the sample.

15. The device of claim **7**, where the solvent containing the analyte is introduced continuously as from a liquid chromatograph, continuous monitoring of a reaction or process, or other similar uses to the surface of the moving heat tolerant material for transport into the atmospheric pressure ion source.

16. The device of claim **7**, where the solvent containing the analyte is introduced in discreet steps as by robotics or an auto-sampler, such as used with liquid chromatographs, thus applying solution from vials, microtitre plates, or similar containers onto the heat tolerant member for transport into the atmospheric pressure ion source.

17. The device of claim **7**, where any solvent applied to the heat tolerant material exterior to the atmospheric pressure ion source housing is assisted in vaporization by a flow of gas, preferably heated and nonreactive gas such as nitrogen gas, so that the solvent is removed prior to analyte entering the ionization region.

18. The device of claim **7**, where the heat tolerant material is a continuous loop.

19. The device of claim **7**, where the heat tolerant material is wire or ribbon from a spool that passes through the source once and is discarded.

20. The device of claim **18**, where heat is applied to the heat tolerant member by resistive or radiative heating to remove residual analyte and impurities as they exit the ion region enclosure and before new analyte is applied to minimize cross contamination.

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