

Title (en)  
Plasma excitation system.

Title (de)  
Plasma-Anregungssystem.

Title (fr)  
Système d'excitation du plasma.

Publication  
**EP 0122403 A1 19841024 (EN)**

Application  
**EP 84101792 A 19840221**

Priority  
US 47338683 A 19830308

Abstract (en)  
A radio frequency excitor apparatus and method produce an inductively coupled plasma to heat an analytic sample. The apparatus includes a radio frequency generator mechanism (29) for producing electrical power of selected radio frequency. The generator mechanism has a power output tuning mechanism (15) comprised of at least one output tuning inductor(21) for determining the generator radio frequency. A separate plasma load circuit is coupled to the generator mechanism and is comprised of a work coil (19) and a series connected, impedance matching capacitor (17). The work coil is adapted to produce an inductively coupled plasma (27) and the capacitor is adapted to substantially balance the combined inductive reactances of the work coil and plasma. A control mechanism for controlling the power input into the plasma load circuit stabilizes the plasma.

IPC 1-7  
**H05H 1/46**

IPC 8 full level  
**G01N 21/73** (2006.01); **H05H 1/46** (2006.01)

CPC (source: EP)  
**H05H 1/46** (2013.01)

Citation (search report)  
• [A] US 3467471 A 19690916 - GREENFIELD STANLEY, et al  
• [A] US 3958883 A 19760525 - TURNER ARTHUR S  
• [AD] ANALYTICA CHIMICA ACTA, no. 74, 1975, Amsterdam S. GREENFIELD et al. "Automatic multi-sample simultaneous multi-element analysis with a H.F. plasma torch and direct reading spectrometer", pages 225-245  
• [AD] PHILIPS TECHNISCHE RUNDSCHAU, vol. 33, no. 2, 1973/74 P.W.J.M. BOUMANS et al. "Eine stabilisierte HF-Argonplasmafackel für Emissionsspektroskopie", pages 51-61

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