

Title (en)  
CRYOGEN FREE COOLING APPARATUS AND METHOD

Title (de)  
KRYOGENFREIE KÜHLVORRICHTUNG UND VERFAHREN

Title (fr)  
APPAREIL ET PROCÉDÉ DE REFROIDISSEMENT SANS CRYOGÈNE

Publication  
**EP 2409096 A2 20120125 (EN)**

Application  
**EP 10710389 A 20100315**

Priority

- GB 2010000454 W 20100315
- GB 0904500 A 20090316

Abstract (en)  
[origin: WO2010106309A2] A cryogen free cooling apparatus comprises at least one heat radiation shield (54) surrounding a working region (20) and located in a vacuum chamber (4). A cryogen free cooling system has a cooling stage coupled to the heat radiation shield (54). Aligned apertures (56,58) are provided in the heat radiation shield and vacuum chamber walls. Sample loading apparatus has a sample holding device (2) attached to one or more elongate probes (3) for inserting the sample holding device through the aligned apertures (56,58) to the working region (20); and a thermal connector enables the sample holding device to be releasably coupled for heat conduction via said connector to a cold body or cold bodies within the vacuum chamber so as to pre-cool a sample on or in the sample holding device.

IPC 8 full level  
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CPC (source: EP US)  
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Cited by  
WO2021229149A1; US11360140B1; GB2592415A; EP4246064A3; WO2021170976A1; WO2022132331A1; EP4150272B1; EP4088068B1; US12013170B2

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