

Title (en)
SPRAY CHAMBER WITH DRYER

Title (de)
SPÜHNRBELKAMMER MIT TROCKNER

Title (fr)
CHAMBRE DE PULVERISATION AVEC SECHOIR

Publication
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Application
EP 97951050 A 19971222

Priority
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Abstract (en)
[origin: WO9829896A1] A spray chamber for producing a sample for an analyzer which may contain a plasma torch. In the chamber, a heated sheath gas is fed into the periphery of the spray surrounding the spray, adjacent the origin of the spray, thus reducing the size of droplets which are recirculated, thereby reducing agglomeration of the droplets and promoting rapid drying of the spray. Preferably all of the spray solvent is evaporated in a very short chamber, thus further reducing the amount of spray recirculated, and all of the combined flow of dried particulates from the spray, nebulizing gas and sheath gas is directed into the torch. In one embodiment, the central core of the combined flow is directed to the torch and the peripheral portion of the combined flow is ducted to waste. In another embodiment the aqueous spray solvent is fully evaporated before it leaves the spray chamber, and the combined flow is directed through a membrane dryer before reaching the torch, to remove most of the water vapor from the flow and thus to reduce water vapor loading on the torch.

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