This thesis deals with possible ways of improving sensitivity and repeatability of determination of cadmium by EcHG – ETAAS. The main complication of this coupled method is condensation of water vapors in the transport capillary, which takes part in the losses of the volatile form of cadmium. Possible solution or at least restriction of the above mentioned problem is heating of the transport route. Experiments also show that reducing the ratio area/volume of transport capillary doesn't lead to reduction of loses of the volatile form of cadmium.