**RESULTS**

There is no effect of analyte chemical form on:

- Primary droplet size distribution (pDSD) (1)
- Tertiary droplet size distribution (tDSD) (2)
- Solvent transport rate (3)
- Plasma characteristics (4)

For a given Qg, the analyte transport rate, Wtot, is independent on the analyte and the solution employed.

![Graph](image)

**EXPERIMENTAL**

- 10 ppm Sn in EtOH 0.75% from: SnCl_4, nBuSnCl_3 (MBT); nBu_2SnCl_2 (DBT); tBu_2SnCl_2 (DTBT)
- Sample introduction system:
  - ICP-AES operating conditions:
    - PERKIN ELMER OPTIMA 4300 DV
    - RF Power (W): 1300
    - Plasma gas flow rate (L/min): 15
    - Auxilary gas flow rate (L/min): 0.2
    - Nebulizer gas flow rate, Qg (L/min): 0.6
    - Liquid flow rate, Ql (mL/min): 0.2 - 1.0
    - i.d. injector (mm): 1.2
    - Sample and integration time (s): 15
    - Torch position (mm): axial
    - Vision view: axial

**EMISSION SIGNAL DEPENDS ON THE TIN COMPOUND**

- I_{SnCl_4} > I_{DTBT} > I_{MBT} > I_{DBT}

**COMPOUND VOLATILITY**

- W_{tot} = (W_{low})_Sn + (W_{high})_Sn
  - Low volatile analyte: W_{low} = W_{SnCl_4} + W_{SnC_2Cl_4}
  - High volatile analyte: W_{high} = W_{MBT} + W_{DBT}

**THE HIGHER COMPOUND VOLATILITY THE HIGHER EMISSION SIGNAL IN ICP-AES**

- SnCl_4: 1470
- SnC_2Cl_4: 1150
- DTBT*: 218
- MBT*: 246
- DBT*: 288

* Estimated values (T-H-E rule)