

# What should we do with elemental evaluations?

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# Arguments

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- Why some people **love** elemental evaluations
  - Reactors and other devices are built of natural elements => elemental evaluations are more convenient for applications
  - Most measurements are done on natural targets => elemental evaluations can be more precise
- Why other people **hate** elemental evaluations
  - Physics is isotopic and so are nuclear codes that calculate isotopic cross sections => elemental data lose their physical behavior
  - Lot of information is lost or messed up (e.g., Q-values, inelastic scattering)
  - It's easy to sum up but impossible to split - we may construct elemental evaluation from the isotopic ones but not other way round

# List of elemental evaluations in VI.8

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## 15 elemental evaluations

- 6-C LANL,ORNL JUN96 M.B.CHADWICK, P.G.YOUNG, C.Y. FU (Unique)
- 12-Mg ORNL FEB78 D.C.LARSON (Only Mg-24 available)
- 14-Si ORNL FEB74 LARSON,PEREY,DRAKE,YOUNG (Isotopic newer - 96)
- 16-S BNL APR79 DIVADEENAM (Only obsolete S-32 available - 77)
- 17-CI GGA FEB67 M.S.ALLEN AND M.K.DRAKE (Isotopic newer - 97)
- 19-K GGA FEB67 M.K.DRAKE (Only obsolete K-41 available - 79)
- 20-Ca LANL,ORNL MAR97 M.B.CHADWICK,P.G.YOUNG,+ (Unique)
- 22-Ti BRC,ANL+ AUG77 C.PHILIS,A.SMITH,R.HOWERTON (Isotopic match)
- 23-V ANL,LLNL,+ JUN88 A.SMITH,D.SMITH+ (Unique)
- 31-Ga LLNL,LANL MAY80 HOWERTON,YOUNG (Unique)
- 40-Zr SAI,BNL APR76 M.DRAKE,D.SARGIS,T.MAUNG+ (Isotopic match)
- 42-Mo LLNL,HEDL FEB79 HOWERTON,SCHMITTROTH+ (Isotopic match)
- 49-In ANL FEB90 A.SMITH,D.SMITH,P.GUENTHER (Isotopic match)
- 72-Hf SAI APR76 M.DRAKE,D.SARGES,T.MAUNG (Isotopic match)
- 74-W LANL MAR82 E.D.ARTHUR (Isotopic newer - 96)