

```

##TITLE=Tiny IR Spectrum for Demo
##JCAMP-DX=4.24
##DATA TYPE=INFRARED SPECTRUM
##OWNER= GPL-3 (modified from BRUKER1.JCM (IUPAC) by B. Hanson)
##XUNITS=1/CM
##YUNITS=TRANSMITTANCE
##FIRSTX= 4000.655017
##LASTX= 400.1619262
##DELTAX= -9.64245605E-1
##MAXY= 95.83563804
##MINY= -2.87246704E-1
##XFACTOR= 4.882812500E-4
##YFACTOR= 1.220703125E-2
##NPOINTS= 612
##FIRSTY= 7493

```

```

##XYDATA=(X++(Y..Y))
4861896G493jknkJlKJjJlKjOkNTjNKJNKMLmKqMnKkOjJKJKTNNMNKJMjKTJTkMlKlKJ
4729586G542nNjKmJMjMjLjKmkLlTlJkNjMLNMTMKlKjmkjktlOkmqqkjOoTrj4j3j9k3k8l8
4611099G336m7o0q2j07j38j73k10k40k62k53k11j55p2K0J09J76K11K28K20J97J70J45J22J01
4563705G025Q6P000N1M4L8L2K8K4K1J7J8J1RTQNMTkMTjNLNMJULJKUJjJkTnmkTLTJ0OLRMULJM
4453117G637JTLJKTJlKlLlJjLkLlJlKjTMjLjJkLlKlLlKjJkJKTJlJkKTlKtLlTjKJTMJTK
4320808G688JKTkLjJOkjJTjTKkKUKjLNkmlLlJKlOmjKkMJTTkNKkKjKjJlTmKjKkKlJmJL
4186523G715jTKLkLlJlKjKJjUKUkJKTlJkNmJLmNjUMkLkTUjMKJKj3J1PnMKLJTKjMkK
4050263G750JjKJTKJqNKJlKlKTPNMlKkLJUjT0j9J8kKkLlKlMmJNj1j2K0lQj5
3929802G753k9L4QmOkMnJmKlNjTKJKJlKlTmTQkMk4LK3kJlJNLkLJLmNjKJl18JK7lJ0MjLlJ
3811316G794JkMkMpKkMmTnPJ5r1J2Q0k2J7kTjQJ6rPqOmn3L1K3Lm8L3K0j4J3p0jrMTkJl
##END=

```

Key to the above:

- **Entire File**. Input for *findVariableLists*, as a vector of character strings.
- **Metadata**. Input for *extractParams*, as a vector of character strings.
- **Variable List**. Input for *processVariableList* and *decompressYYY*, as a vector of character strings.

The entire file is the input to *findVariableLists*. Here are two raw lines from the variable list; each is a character vector of length one:

```

[1] "4861896G493jknkJlKJjJlKj%j0%kNTjNKJNKMLmKq%MnKk%OjJKJKTN%NM%NK%JM%JjKTJTkMlKlKJ"
[2] "4729586G542nNjKmJM%JmMjLjKmkLlTlJkN%jMLN%TMKl%Kj%mkjktlOkmqqkjOoTrj4j3j9k3k8l8"

```

The input to *decompLines* and *getComp* is a vector of *named* raw lines:

```

Line_17
"4861896G493jknkJlKJjJlKj%j0%kNTjNKJNKMLmKq%MnKk%OjJKJKTN%NM%NK%JM%JjKTJTkMlKlKJ"
Line_18
"4729586G542nNjKmJM%JmMjLjKmkLlTlJkN%jMLN%TMKl%Kj%mkjktlOkmqqkjOoTrj4j3j9k3k8l8"

```

The input to *unsQZ*, *insertDUPS*, *deDIF* and *yValueCheck* is a *named* list of lines. Each raw line has been split into the individual pieces and named according to its compress-

sion mode:

\$Line_17

NUM	SQZ	DIF	DIF	DIF	DIF	DIF	DIF
"4861896"	"G493"	"j"	"k"	"n"	"k"	"J"	"l"
DIF	DIF	DIF	DIF	DIF	DIF	DIF	DIF
"k"	"J"	"j"	"J"	"l"	"K"	"%"	"j"
DIF	DIF	DIF	DIF	DUP	DIF	DIF	DIF
"O"	"%"	"k"	"N"	"T"	"j"	"N"	"K"
DIF	DIF	DIF	DIF	DIF	DIF	DIF	DIF
"J"	"N"	"K"	"M"	"l"	"m"	"K"	"q"
DIF	DIF	DIF	DIF	DIF	DIF	DIF	DIF
"%"	"M"	"n"	"K"	"k"	"%"	"O"	"j"
DIF	DIF	DIF	DIF	DUP	DIF	DIF	DIF
"J"	"K"	"J"	"K"	"T"	"N"	"%"	"N"
DIF	DIF	DIF	DIF	DIF	DIF	DIF	DIF
"M"	"%"	"N"	"K"	"%"	"J"	"M"	"%"
DIF	DIF	DIF	DUP	DIF	DUP	DIF	DIF
"J"	"j"	"K"	"T"	"J"	"T"	"k"	"M"
DIF	DIF	DIF	DIF	DIF			
"l"	"K"	"l"	"K"	"J"			

The input to *unDIF* is a character vector with entries named with ASDF mode:

NUM	SQZ	DIF	DIF	DIF	DIF	DIF	DIF
"4861896"	"G493"	"j"	"k"	"n"	"k"	"J"	"l"
DIF	DIF	DIF	DIF	DIF	DIF	DIF	DIF
"k"	"J"	"j"	"J"	"l"	"K"	"%"	"j"
DIF	DIF	DIF	DIF	DUP	DIF	DIF	DIF
"O"	"%"	"k"	"N"	"T"	"j"	"N"	"K"
DIF	DIF	DIF	DIF	DIF	DIF	DIF	DIF
"J"	"N"	"K"	"M"	"l"	"m"	"K"	"q"
DIF	DIF	DIF	DIF	DIF	DIF	DIF	DIF
"%"	"M"	"n"	"K"	"k"	"%"	"O"	"j"
DIF	DIF	DIF	DIF	DUP	DIF	DIF	DIF
"J"	"K"	"J"	"K"	"T"	"N"	"%"	"N"
DIF	DIF	DIF	DIF	DIF	DIF	DIF	DIF
"M"	"%"	"N"	"K"	"%"	"J"	"M"	"%"
DIF	DIF	DIF	DUP	DIF	DUP	DIF	DIF
"J"	"j"	"K"	"T"	"J"	"T"	"k"	"M"
DIF	DIF	DIF	DIF	DIF			
"l"	"K"	"l"	"K"	"J"			

The input to *repDUPs* is a character vector with length one:

DUP
"T"