

Common NMR experiments and the time it takes to run them:

¹H NMR:

Standard experiment – 16 scans, 1min 30sec

- 32 scans, 2min 50 sec
- 64 scans, 5 min 31 sec
- 128 scans, 10 min 53 sec
- 256 scans, 21 min 37 sec
- 512 scans, 43 min

¹³C NMR:

Standard experiment – 1024 scans, ~1h

For carbon experiments add 1h for each additional 1000 scans

¹⁹F NMR:

Standard experiment – 16 scans, 1 min

- 64 scans, 2 min
- 128 scans, 4 min
- 256 scans, 7 min 35 sec
- 512 scans, 15 min

³¹P NMR:

Standard experiment – 32 scans, 1 min 30 sec

- 64 scans, 3 min
- 128 scans, 5 min 30 sec
- 256 scans, 11 min
- 512 scans, 21 min 45 sec

HSQC:

Standard experiment – 2 scans, 27 min

- 8 scans, 58 min
- 20 scans, 2 hours 35 min
- 32 scans, 3 hours 27 min
- 64 scans, 5 hours 45 min

HMBC:

Standard experiment – 4 scans, 1 hour 6 min

- 8 scans, 2 hours 28 min
- 16 scans, 4 hours 25 min

COSY:

Standard experiment – 1 scan, 5 min 23 sec

- 4 scans, 19 min 46 sec
- 8 scans, 39 min
- 16 scans, 1 hour 17 min
- 20 scans, 1 hour 36 min

- 32 scans, 2 hours 33 min
- 64 scans, 5 hours 7 min

NOESY:

Standard experiment – 16 scans, 2 hours 59 min

- 20 scans, 3 hours 45 min
- 32 scans, 5 hours 57 min