

COVID-19 Vaccines: Cold Chain Temperatures

| !! DO NOT REFREEZE THAWED VACCINES !! | | Manufacturer | | | |
|---|--|---|--|---|----------------------------------|
| <i>Minimize exposure to heat and light, avoid exposure to direct sunlight</i> | Cold Storage Condition | Moderna | Pfizer-BioNTech* | Janssen | AstraZeneca |
| Unpunctured vials in long-term storage | Ultralow Temperature: -80°C to -60°C (-112°F to -76°F) | Do not store at these conditions | Until expiration date given on vial | Do not store at these conditions | Do not store at these conditions |
| | Frozen Temperature: -25°C to -15°C (-13°F to 5°F) | Until expiration date attached to the lot number, can be stored up to -50°C/-58°F | 14 days cumulatively, a one time return to ULT storage is allowed | Do not store at these conditions (arrives thawed) | Do not store at these conditions |
| Unpunctured vials in short-term storage | Thawed Temperatures: 2°C to 8°C (36°F to 46°F) | 30 days | 1 month [31 days] | Until expiration date attached to the lot number | 6 months |
| | Room Temperature: 8°C to 25°C (46°F to 77°F) | 24 hours cumulatively | 2 hours cumulatively | 12 hours cumulatively | Do not store at these conditions |
| Punctured/diluted doses in short-term storage | Thawed Temperatures: 2°C to 8°C (36°F to 46°F) | 12 hours (from time of puncture, needs to be at room temp prior to inoculation) | 6 hours (from time of dilution, needs to be at room temp prior to inoculation) | 6 hours (from time of puncture) | 48 hours (from time of puncture) |
| | Room Temperature: 8°C to 25°C (46°F to 77°F) | 12 hours (from time of puncture) | 6 hours (from time of dilution) | 2 hours (from time of puncture) | 6 hours cumulatively |