**Olivine Thermometers and Hygrometers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Reference | Name in ThermoBar | T-dependent? | P-dependent? | H2O-dependent? |
| **Olivine-Liquid thermometry. *Function “calculate\_ol\_liq\_temp”*** | | | | |
| Putirka (2008) | T\_Put2008\_eq19 |  | **🗸** | **✗** |
| T\_Put2008\_eq21 | **🗸** | **🗸** |
| T\_Put2008\_eq22 | **🗸** | **🗸** |
| Beattie (1993) | T\_Beatt93\_ol | **🗸** | **✗** |
| T\_Beatt93\_ol\_HerzCorr | **🗸** | **✗** |
| Sisson and Grove (1992) | T\_Sisson1992 | **🗸** | **✗** |
| Pu et al. (2017) | T\_Pu2017 | **✗** | **✗** |
| Pu et al. (2021) | T\_Pu2021 | **🗸** | **✗** |
| **Olivine-Liquid hygrometers. *Function “calculate\_ol\_liq\_hygr”*** | | | | |
| Gavrilenko et al. (2016) | H\_Gavr2016 | **✗** | **✗** |  |
| **Olivine-Spinel thermometry. *Function “calculate\_ol\_sp\_temp”*** | | | | |
| Coogan et al. (2014) | T\_Coogan2014 |  | **✗** | **✗** |
| Wan et al. (2008) | T\_Wan2008 | **✗** | **✗** |
| **Other Functions** | | | | |
| **calculate\_eq\_ol\_content():** calculates equilibrium olivine forsterite contents (with user-selected options for equilibrium criteria).  **calculate\_ol\_rhodes\_diagram\_lines():** Calculates equilibrium lines for a range of melt Mg#s contents (with user-selected options for equilibrium criteria). | | | | |

**Feldspar Thermometers, Barometers and Hygrometers**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Phase | Reference | Name in ThermoBar | T-dependent? | P-dependent? | H2O-dependent? |
| **Feldspar-Liquid thermometry. *Function “calculate\_fspar\_liq\_temp”*** | | | | | |
| **Plag-Liq** | Putirka (2008) | T\_Put2008\_eq23 |  | **🗸** | **🗸** |
| T\_Put2008\_eq24a | **🗸** | **🗸** |
| **Kspar-Liq** | Putirka (2008) | T\_Put2008\_eq24b |  | **🗸** | **✗** |
| **Feldspar-Liquid barometry. *Function “calculate\_fspar\_liq\_press”*** | | | | | |
| **Plag-Liq** | Putirka (2008) | P\_Put2008\_eq25 | **🗸** |  | **✗** |
| **Feldspar-Liquid hygrometry. *Function “calculate\_fspar\_liq\_hygr”*** | | | | | |
| **Plag-Liq** | Putirka (2008) | H\_Put2008\_eq25b | **🗸** | **🗸** |  |
| Putirka (2005) | H\_Put2005\_eqH | **🗸** | **✗** |
| Waters & Lange (2015) | H\_Waters2015 | **🗸** | **🗸** |
| Masotta et al. (2019) | H\_Masotta2019 | **🗸** | **✗** |
| **Plagioclase-Alkali Feldspar thermometry. Function “calculate\_plag\_kspar\_temp”** | | | | | |
| **Plag-Kspar** | Putirka (2008) | T\_Put2008\_eq27a |  | **🗸** | **✗** |
| T\_Put2008\_eq27b | **🗸** | **✗** |
| T\_Put\_Global\_2Fspar | **🗸** | **✗** |
| **Other Functions** | | | | | |
| **calculate\_fspar\_liq\_press\_temp:** Iteratively solves P and T for fspar-liq pairs  **calculate\_plag\_kspar\_temp\_matching:** Calculates P and T for all possible plag-kspar pairs | | | | | |