**Clinopyroxene-Liquid Thermobarometers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Reference | Name in ThermoBar | T-dependent? | P-dependent? | H2O-dependent? |
| **Clinopyroxene-Liquid Barometry. *Function “calculate\_cpx\_liq\_press”*** | | | | |
| Putirka (1996) | P\_Put1996\_eqP1 | **🗸** |  | **✗** |
| P\_Put1996\_eqP2 | **🗸** | **✗** |
| Putirka (2003) | P\_Put2003 | **🗸** | **✗** |
| Putirka (2008) | P\_Put2008\_eq30 | **🗸** | **🗸** |
| P\_Put2008\_eq31 | **🗸** | **🗸** |
| P\_Put2008\_eq32c | **🗸** | **🗸** |
| Masotta et al. (2013) *recalibration of Putirka eqs. for alkali systems* | P\_Mas2013\_eqPalk1 | **🗸** | **✗** |
| P\_Mas2013\_eqPalk2 | **🗸** | **✗** |
| P\_Mas2013\_eqalk32c | **🗸** | **🗸** |
| Masotta et al. (2013) | P\_Mas2013\_Palk2012 | **✗** | **🗸** |
| Neave & Putirka (2017) | P\_Neave2017 | **🗸** | **✗** |
| Petrelli et al. (2021) | P\_ Petrelli2021\_Cpx\_Liq | **✗** | **🗸** |
| Jorgenson et al. (2021) | PlaceHolder |  |  |
| **Clinopyroxene-Liquid Thermometry. *Function “calculate\_cpx\_liq\_temp”*** | | | | |
| Putirka (1996) | T\_Put1996\_eqT1 |  | **✗** | **✗** |
| T\_Put1996\_eqT2 | **🗸** | **✗** |
| Putirka (1999) | T\_Put1999 | **🗸** | **✗** |
| Putirka (2003) | T\_Put2003 | **🗸** | **✗** |
| Putirka (2008) | T\_Put2008\_eq33 | **🗸** | **🗸** |
| Masotta et al. (2013)  *Recalibration of Putirka eqs. for alkali systems* | T\_Mas2013\_eqTalk1 | **✗** | **✗** |
| T\_Mas2013\_eqTalk2 | **🗸** | **✗** |
| T\_Mas2013\_eqalk33 | **🗸** | **🗸** |
| Masotta et al. (2013) | T\_Mas2013\_Talk2012 | **✗** | **🗸** |
| Brugman & Till (2019) | T\_Brug2019 | **✗** | **✗** |
| Petrelli et al. (2021) | T\_ Petrelli2021\_Cpx\_Liq |  | **✗** | **🗸** |
| Jorgenson et al. (2021) | PlaceHolder |  |  |  |
| **Other Functions** | | | | |
| ***calculate\_cpx\_liq\_press\_temp():*** Iteratively solves P and T for cpx-liq pairs using an equation for P and an equation for T  **calculate\_cpx\_liq\_press\_temp\_matching():** Calculates P and T for all possible cpx-liquid pairs (with user-selected options for equilibrium criteria)  **calculate\_cpx\_rhodes\_diagram\_lines():** Calculates equilibrium lines for a range of melt Mg#s using a variety of user-selected options for equilibrium models. | | | | |

**Clinopyroxene-only Thermobarometers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Reference | Name in ThermoBar | T-dependent? | P-dependent? | H2O-dependent? |
| **Clinopyroxene-only Barometry. *Function “calculate\_cpx\_only\_press”*** | | | | |
| Putirka (2008) | P\_Put2008\_eq32a | **🗸** |  | **✗** |
| P\_Put2008\_eq32b | **🗸** | **🗸** |
| Petrelli et al. (2021)\* | P\_Petrelli2021\_Cpx\_only | **✗** | **✗** |
| P\_Petrelli2021\_Cpx\_only\_withH2O\* | **✗** | **🗸** |
| Wang et al. (2021) | P\_Wang2021\_eq1 | **✗** | **✗** |
| P\_Wang2021\_eq3 | **✗** | **✗** |
| Jorgenson et al. (2021) | PlaceHolder |  |  |

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|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Reference | Name in ThermoBar | T-dependent? | P-dependent? | H2O-dependent? |
| **Clinopyroxene-only Thermometry. *Function “calculate\_cpx\_only\_temp”*** | | | | |
| Putirka (2008) | T\_Put2008\_eq32d |  | **🗸** | **✗** |
| T\_Put2008\_eq32d\_subsol | **🗸** | **✗** |
| Petrelli et al. (2021) | T\_Petrelli2021\_Cpx\_only\* | **✗** | **✗** |
| T\_Petrelli2021\_Cpx\_only\_withH2O\* | **✗** | **🗸** |
| Wang et al. (2021) | T\_Wang2021\_eq2 | **✗** | **🗸** |
| T\_Wang2021\_eq4 | **✗** | **🗸** |
| Jorgenson et al. (2021) | PlaceHolder |  |  |  |
| **Other Functions** | | | | |
| ***calculate\_cpx\_only\_press\_temp():*** Iteratively solves P and T for cpx using an equation for P and an equation for T | | | | |

**Orthopyroxene Thermobarometers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Reference | Name in ThermoBar | T-dependent? | P-dependent? | H2O-dependent? |
| **Orthopyroxene-Liquid Barometry. *Function “calculate\_opx\_liq\_press”*** | | | | |
| Putirka (2008) | P\_Put2008\_eq29a | **🗸** |  | **🗸** |
| P\_Put2008\_eq29b | **🗸** | **🗸** |
| Putirka Supplement New “Global” calibrations | P\_Put\_Global\_Opx | **✗** | **✗** |
| P\_Put\_Felsic\_Opx | **✗** | **✗** |
| **Orthopyroxene-Liquid Thermometry. *Function “calculate\_opx\_liq\_temp”*** | | | | |
| Putirka (2008) | T\_Put2008\_eq28a |  | **🗸** | **🗸** |
| T\_Put2008\_eq28b\_opx\_sat | **🗸** | **🗸** |
| **Orthopyroxene-only Barometry. Function “calculate\_opx\_only\_press”** | | | | |
| Putirka (2008) | P\_Put2008\_eq29c | **🗸** |  | **✗** |
| **Other Functions** | | | | |
| ***calculate\_opx\_liq\_press\_temp():*** Iteratively solves P and T for opx-liq pairs using an equation for P and an equation for T.  **calculate\_opx\_liq\_press\_temp\_matching():** Calculates P and T for all possible opx-liquid pairs (with user-selected options for equilibrium criteria).  **calculate\_opx\_rhodes\_diagram\_lines():** Calculates equilibrium lines for a range of melt Mg#s using a variety of user-selected options for equilibrium models | | | | |

**Two pyroxene Thermobarometers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Reference | Name in ThermoBar | T-dependent? | P-dependent? | H2O-dependent? |
| **Orthopyroxene-Clinopyroxene Barometry. *Function “calculate\_cpx\_opx\_press”*** | | | | |
| Putirka (2008) | P\_Put2008\_eq38 | **✗** |  | **✗** |
| P\_Put2008\_eq39 | **🗸** | **✗** |
| **Orthopyroxene-Clinopyroxene Thermometry. *Function “calculate\_cpx\_opx\_press”*** | | | | |
| Putirka (2008) | T\_Put2008\_eq36 |  | **🗸** | **✗** |
| T\_Put2008\_eq37 | **🗸** | **✗** |
| Brey and Kohler (1990) | T\_Brey1990 | **🗸** | **✗** |
| Wells (1977) | T\_Wells1977 | **✗** | **✗** |
| Wood and Banno (1973) | T\_Wood1973 | **✗** | **✗** |
| **Other Functions** | | | | |
| ***calculate\_cpx\_opx\_press\_temp():*** Iteratively solves P and T for opx-cpx pairs using an equation for P and an equation for T.  **calculate\_cpx\_opx\_press\_temp\_matching():** Calculates P and T for all possible opx-cpx pairs (with user-selected options for equilibrium criteria). | | | | |