**Appendix**

Radiocarbon dates from Southern Mesopotamia used in Bayesian modelling. Outliers highlighted in red.

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| --- | --- | --- | --- | --- | --- | --- |
| **Site** | **Lab. no.** | **Date (BP)** | **Period** | **Material** | **Phase** | **Reference** |
| Abu Salabikh | AA.10170 | 4760 ± 50 | Middle Uruk | Charcoal | Phase 1 | Wright & Rupley  2001 |
| Abu Salabikh | AA.10169 | 5005 ± 60 | Middle Uruk | Barley | Phase 1 | Wright & Rupley  2001 |
| Abu Salabikh | AA.5289 | 4785 ± 65 | Middle Uruk | Seed/Chaff | Phase 1 | Wright & Rupley  2001 |
| Abu Salabikh | AA.5288 | 4790 ± 60 | Middle Uruk | Plant remains | Phase 1 | Wright & Rupley  2001 |
| Abu Salabikh | AA.10168 | 4900 ± 50 | Middle Uruk | Seeds | Phase 1 | Wright & Rupley  2001 |
| Nippur | P-530 | 4672 ± 74 | Late Uruk | Charcoal | Phase 2 | Stuckenrath 1963 |
| Uruk | UGAMS-12443 | 4640 ± 30 | Late Uruk | Wood | Phase 2a | van Ess 2013 |
| Uruk | UGAMS-12440 | 4650 ± 25 | Late Uruk | Cedar | Phase 2b | van Ess 2015 |
| Uruk | UGAMS-12441 | 3860 ± 25 | Late Uruk | Pine | Phase 2 | van Ess 2015 |
| Uruk | UGAMS-12442 | 4660 ± 30 | Late Uruk | Pine? | Phase 2a | van Ess 2015 |
| Uruk | UGAMS-12443 | 4640 ± 30 | Late Uruk | Wood | Phase 2 | van Ess 2013 |
| Uruk | UGAMS-12435 | 4980 ± 25 | Late Uruk | Bone Apatite (Sheep/goat) | Phase 2 | van Ess 2015 |
| Uruk | UGAMS-12436 | 4630 ± 25 | Late Uruk | Bone Apatite (Sheep/goat) | Phase 2 | van Ess 2015 |
| Uruk | UGAMS-12137 | 4930 ± 25 | Late Uruk | Bone Apatite (Sheep/goat) | Phase 2 | van Ess 2015 |
| Uruk | UGAMS-12438 | 4540 ± 25 | Late Uruk | Bone Apatite (Sheep/goat) | Phase 2 | van Ess 2015 |
| Uruk | UGAMS-12439 | 4700 ± 25 | Late Uruk | Bone Apatite (Sheep/goat) | Phase 2 | van Ess 2015 |
| Uruk | UGAMS-20148 | 4570 ± 20 | Late Uruk | Carbonised Straw/Reed | Phase 2 | van Ess 2015 |
| Uruk | UGAMS-20149 | 5350 ± 30 | Late Uruk | Carbonised Straw/Reed | Phase 2 | van Ess 2015 |
| Uruk | UGAMS-18863 | Uniform  3290-3245 calBC | Late Uruk | Wood | Phase 2 | van Ess 2015 |
| Uruk | UGAMS-20152 | 4460 ± 20 | Jemdet Nasr | Reed/Straw | Phase 3 | van Ess 2015 |
| Uruk | UGAMS-20153 | 4460 ± 20 | Jemdet Nasr | Poplar | Phase 3 | van Ess 2015 |
| Uruk | UGAMS-20154 | 4530 ± 20 | Jemdet Nasr | Ash | Phase 3 | van Ess 2015 |
| Uruk | UGAMS-20155 | 4790 ± 25 | Jemdet Nasr | Ash | Phase 3 | van Ess 2015 |
| Uruk | UGAMS-20156 | 4990 ± 25 | Jemdet Nasr | Ash | Phase 3 | van Ess 2015 |
| Uruk | UGAMS-20157 | 7380 ± 30 | Jemdet Nasr | Ash | Phase 3 | van Ess 2015 |
| Girsu | UGAMS-8185 | 4150 ± 30 | ED I/II | Charcoal | Phase 4 | Hritz et al. 2012 |
| Nippur | P-803 | 4221 ± 53 | ED I/II | Charcoal | Phase 4a | Stuckenrath & Ralph 1965 |
| Nippur | P-801 | 4590 ± 65 | ED I/II | Charcoal | Phase 4a | Stuckenrath & Ralph 1965 |
| Nippur | P-798 | 4145 ± 59 | ED I/II | Charcoal | Phase 4a | Stuckenrath & Ralph 1965 |
| Nippur | P-800 | 4157 ± 62 | ED I/II | Charcoal | Phase 4a | Stuckenrath & Ralph 1965 |
| Nippur | P-820 | 4090 ± 62 | ED I/II | Charcoal | Phase 4a | Stuckenrath & Ralph 1965 |
| Nippur | P-819 | 4272 ± 65 | ED I/II | Charcoal | Phase 4a | Stuckenrath & Ralph 1965 |
| Nippur | P-799 | 8472 ± 102 | ED I/II | Charcoal | Phase 4a | Stuckenrath & Ralph 1965 |
| Nippur | P-809 | 3945 ± 62 | ED I/II | Charcoal | Phase 4a | Stuckenrath & Ralph 1965 |
| Nippur | P-806 | 4345 ± 66 | ED I/II | Charcoal | Phase 4b | Stuckenrath & Ralph 1965 |
| Nippur | P-807 | 4090 ± 64 | ED I/II | Charcoal & dirt | Phase 4b | Stuckenrath & Ralph 1965 |
| Nippur | P-804 | 4095 ± 52 | ED IIIa/b | Charcoal | Phase 5 | Stuckenrath & Ralph  1965 |
| Nippur | P-805 | 4006 ± 62 | ED IIIa/b | Charcoal | Phase 5 | Stuckenrath & Ralph  1965 |
| Abu Salabikh | BM-1365 | 3938 ± 54 | ED IIIa | Charcoal | Phase 5a | Postgate 1977 |
| Abu Salabikh | BM-2328R | 4010 ± 130 | ED IIIa | Charcoal | Phase 5a | Bowman et al. 1990 |
| Abu Salabikh | BM-1366 | 3869 ± 56 | ED IIIa | Charcoal | Phase 5a | Postgate 1977 |
| Ur | BM-70 | 4030 ± 150 | ED IIIa/b | Burnt Bone | Phase 5b | Barker & Mackey 1961 |
| Ur | BM-76 | 3390 ± 150 | ED IIIa/b | Burnt Bone | Phase 5b | Barker & Mackey 1961 |
| Ur | BM-64 | 3920 ± 150 | ED IIIa/b | Bone | Phase 5b | Barker & Mackey  1961 |
| Kish | OxA-28,283 | 3905 ± 27 | ED IIIb | Bone | Phase 6 | Zaina 2015 |
| Nippur | P-810 | 4074 ± 64 | ED IIIb | Charcoal | Phase 6 | Stuckenrath & Ralph  1965 |