

CTAB-PEG DNA EXTRACTION FROM FUNGI WITH HIGH CONTENTS OF POLYSACCHARIDES, X. Huang, N. Duan, H. Xu, T.

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Supplementary Table

Appendix.1 The Data of Eleven Different Methods

| Extraction Method | Sample | OD260/OD280 | OD260/OD230 | DNA concentration(ng/μl) | Yield(μg/g) | Dry weight of the mycelium(g) |
|--------------------------|---------------|--------------------|--------------------|---------------------------------|--------------------|--------------------------------------|
| CTAB-PEG method | 1 | 1.83 | 2.01 | 199.47 | 40.71 | 0.098 |
| | 2 | 1.84 | 2.1 | 198.6 | 38.19 | 0.104 |
| | 3 | 1.82 | 2.31 | 189.57 | 35.11 | 0.108 |
| | 4 | 1.91 | 2.25 | 168.26 | 29.78 | 0.113 |
| | 5 | 1.85 | 2.39 | 176.38 | 32.66 | 0.108 |
| | 6 | 1.87 | 2.36 | 192.24 | 36.97 | 0.104 |
| 4%CTAB method | 1 | 1.87 | 2.11 | 82.5 | 13.75 | 0.12 |
| | 2 | 1.74 | 2.09 | 114.73 | 21.85 | 0.105 |
| | 3 | 1.89 | 1.96 | 96.29 | 18.17 | 0.106 |
| | 4 | 1.88 | 2.03 | 94.11 | 16.37 | 0.115 |
| | 5 | 1.72 | 2.14 | 84.13 | 15.58 | 0.108 |
| | 6 | 1.77 | 2.18 | 95.19 | 18.31 | 0.104 |
| 2%CTAB method | 1 | 1.76 | 1.92 | 35.91 | 6.97 | 0.103 |
| | 2 | 1.81 | 1.78 | 40.36 | 7.54 | 0.107 |
| | 3 | 1.75 | 1.74 | 49.54 | 8.93 | 0.111 |

| | | | | | | |
|-----------------------|---|------|------|-------|-------|-------|
| | 4 | 1.77 | 1.81 | 35.18 | 6.51 | 0.108 |
| | 5 | 1.87 | 1.73 | 48.5 | 9.24 | 0.105 |
| | 6 | 1.83 | 1.7 | 53.23 | 10.04 | 0.106 |
| High-salt CTAB Method | 1 | 1.82 | 1.76 | 83.3 | 15.01 | 0.111 |
| | 2 | 1.84 | 1.77 | 79.34 | 13.45 | 0.118 |
| | 3 | 1.75 | 1.82 | 89.57 | 15.58 | 0.115 |
| | 4 | 1.78 | 1.78 | 78.14 | 12.92 | 0.121 |
| | 5 | 1.73 | 1.84 | 86.5 | 16.02 | 0.108 |
| | 6 | 1.77 | 1.75 | 86.78 | 16.22 | 0.107 |
| Commerical Kit Method | 1 | 1.82 | 2.08 | 89.19 | 22.02 | 0.081 |
| | 2 | 1.81 | 2.16 | 77.63 | 18.48 | 0.084 |
| | 3 | 1.86 | 2.25 | 87.12 | 18.34 | 0.095 |
| | 4 | 1.88 | 2 | 79.84 | 17.55 | 0.091 |
| | 5 | 1.85 | 1.98 | 90.12 | 18.21 | 0.099 |
| | 6 | 1.8 | 2.05 | 78.05 | 13.69 | 0.114 |
| Sodium Laurate Method | 1 | 1.82 | 1.87 | 45.23 | 8.45 | 0.107 |
| | 2 | 1.7 | 1.85 | 57.18 | 10.79 | 0.106 |
| | 3 | 1.75 | 1.76 | 46.49 | 8.86 | 0.105 |
| | 4 | 1.79 | 1.72 | 45.08 | 8.43 | 0.107 |
| | 5 | 1.82 | 1.81 | 56.13 | 10.11 | 0.111 |
| | 6 | 1.73 | 1.85 | 38.19 | 6.70 | 0.114 |
| Urea Method | 1 | 1.77 | 1.35 | 28.19 | 5.81 | 0.097 |
| | 2 | 1.65 | 1.48 | 24.56 | 5.17 | 0.095 |
| | 3 | 1.72 | 1.33 | 34.18 | 6.70 | 0.102 |

| | | | | | | |
|------------------------|---|------|------|-------|------|-------|
| | 4 | 1.79 | 1.41 | 19.27 | 3.82 | 0.101 |
| | 5 | 1.68 | 1.47 | 25.94 | 5.19 | 0.1 |
| | 6 | 1.78 | 1.49 | 31.47 | 6.17 | 0.102 |
| <hr/> | | | | | | |
| Benzyl Chloride Method | 1 | 1.79 | 1.87 | 28.13 | 5.99 | 0.094 |
| | 2 | 1.68 | 1.73 | 19.81 | 4.13 | 0.096 |
| | 3 | 1.82 | 1.79 | 27.34 | 5.76 | 0.095 |
| | 4 | 1.84 | 1.81 | 27.52 | 5.62 | 0.098 |
| | 5 | 1.76 | 1.95 | 34.01 | 6.18 | 0.11 |
| | 6 | 1.72 | 1.94 | 27.36 | 5.53 | 0.099 |
| <hr/> | | | | | | |
| Glass Bead Method | 1 | 1.82 | 1.56 | 35.23 | 6.52 | 0.108 |
| | 2 | 1.81 | 1.59 | 44.48 | 8.72 | 0.102 |
| | 3 | 1.79 | 1.57 | 37.79 | 8.04 | 0.094 |
| | 4 | 1.84 | 1.61 | 46.31 | 8.82 | 0.105 |
| | 5 | 1.82 | 1.55 | 38.12 | 7.47 | 0.102 |
| | 6 | 1.88 | 1.64 | 39.1 | 7.11 | 0.11 |
| <hr/> | | | | | | |
| Snailase Method | 1 | 1.57 | 1.45 | 32.24 | 5.92 | 0.109 |
| | 2 | 1.54 | 1.5 | 25.18 | 4.89 | 0.103 |
| | 3 | 1.49 | 1.64 | 29.05 | 5.87 | 0.099 |
| | 4 | 1.57 | 1.58 | 31.44 | 5.61 | 0.112 |
| | 5 | 1.68 | 1.69 | 35.27 | 6.30 | 0.112 |
| | 6 | 1.51 | 1.52 | 28.04 | 5.24 | 0.107 |
| <hr/> | | | | | | |
| Proteinase K Method | 1 | 1.42 | 1.58 | 23.13 | 4.63 | 0.1 |
| | 2 | 1.6 | 1.47 | 18.92 | 3.71 | 0.102 |
| | 3 | 1.77 | 1.42 | 27.38 | 5.02 | 0.109 |
| | 4 | 1.68 | 1.45 | 21.19 | 4.00 | 0.106 |

| | | | | | |
|---|------|------|-------|------|-------|
| 5 | 1.68 | 1.51 | 26.54 | 4.78 | 0.111 |
| 6 | 1.61 | 1.49 | 19.03 | 3.88 | 0.098 |

Table. 2. The Comparison of Eleven Different DNA Extraction Methods

| Procotols of DNA extraction | Time consume of digestion (h) | Time consume of purification (h) | Time consume of precipitation (h) | Time consume of other operations (h) | Total time consume of practical operation (h) | Total time consume of practical operation | Reference |
|------------------------------------|--------------------------------------|---|--|---|--|--|------------------|
| CTAB-PEG method | 1.0-2.0 | 1.5-2.0 | 0.5-1.0 | 2.0 | 5.0-7.0 | *** | |
| 4%CTAB method | 1.0-2.0 | 2.0-2.5 | 5.0-6.0 | 1.0-2.0 | 9.0-12.5 | ***** | 11 |
| 2%CTAB | 1.0-2.0 | 1.5-2.0 | 1.5-2.0 | 1.5-2.0 | 5.5-8.0 | *** | 10 |
| High-salt CTAB Method | 0.5-1.0 | 1.0-1.5 | 0.5 | 1.0-1.5 | 3.0-4.5 | ** | 12 |
| Commerical Kit Method | 1.0 | 0.3-0.5 | 0.2-0.3 | 0.5-1.0 | 2.0-2.8 | * | 13 |
| Sodium Laurate Method | 0.5-1.0 | 1.0-1.5 | 1.0 | 1.0-1.5 | 3.5-5.0 | ** | 16 |
| Urea Method | 1.5-2.0 | 0.5-1.0 | 0.5-1.0 | 0.5-1.0 | 3.0-5.0 | ** | 14 |
| Benzyl Chloride Method | 1.0 | 1.5 | 0.3-0.5 | 0.5-1.0 | 3.3-4.0 | ** | 5 |

| | | | | | | | |
|---------------------|---------|---------|---------|---------|----------|------|----|
| Glass Bead Method | 1.5-2.0 | 1.5-2.0 | 0.5-1.0 | 1.5-2.0 | 5.0-7.0 | *** | 17 |
| Snailase Method | 3.0-4.0 | 2.5-4.0 | 1.5-2.0 | 1.0-2.0 | 8.0-12.0 | **** | 6 |
| Proteinase K Method | 6.0 | 0.5-1.0 | 0.5-1.0 | 1.0-1.5 | 8.0-9.5 | *** | 15 |

Note: the more numbers of asterisk, the deeper levels. if total time consuming of practical operation is more than 3 hours, there will be two asterisks, if total time consuming of practical operation is more than 5 hours, there will be three asterisks, if total time consuming of practical operation is more than 8 hours, there will be four asterisks.