**附录1：常用正交表**

# L4（23）：3因素2水平

|  |  |  |  |
| --- | --- | --- | --- |
| 列号 | 1 | 2 | 3 |
| 试验号 |
| 1 | 1 | 1 | 1 |
| 2 | 1 | 2 | 2 |
| 3 | 2 | 1 | 2 |
| 4 | 2 | 2 | 1 |

# L8(27)：7因素2水平

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 列号 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 试验号 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 1 | 1 | 1 | 2 | 2 | 2 | 2 |
| 3 | 1 | 2 | 2 | 1 | 1 | 2 | 2 |
| 4 | 1 | 2 | 2 | 2 | 2 | 1 | 1 |
| 5 | 2 | 1 | 2 | 1 | 2 | 1 | 2 |
| 6 | 2 | 1 | 2 | 2 | 1 | 2 | 1 |
| 7 | 2 | 2 | 1 | 1 | 2 | 2 | 1 |
| 8 | 2 | 2 | 1 | 2 | 1 | 1 | 2 |

# L12(211)：11因素2水平

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 列号 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 试验号 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 2 | 2 | 2 |
| 4 | 1 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 1 | 2 |
| 5 | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 1 | 2 | 1 |
| 6 | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 1 | 1 |
| 7 | 2 | 1 | 2 | 2 | 1 | 1 | 2 | 2 | 1 | 2 | 1 |
| 8 | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 2 |
| 9 | 2 | 1 | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 1 |
| 10 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 2 |
| 11 | 2 | 2 | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 2 | 2 |
| 12 | 2 | 2 | 1 | 1 | 2 | 1 | 2 | 1 | 2 | 2 | 1 |

# L9（34）：4因素3水平

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 列号 | 1 | 2 | 3 | 4 |
| 试验号 |
| 1 | 1 | 1 | 1 | 1 |
| 2 | 1 | 2 | 2 | 2 |
| 3 | 1 | 3 | 3 | 3 |
| 4 | 2 | 1 | 2 | 3 |
| 5 | 2 | 2 | 3 | 1 |
| 6 | 2 | 3 | 1 | 2 |
| 7 | 3 | 1 | 3 | 2 |
| 8 | 3 | 2 | 1 | 3 |
| 9 | 3 | 3 | 2 | 1 |

# L16（45）：5因素4水平

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 列号 | 1 | 2 | 3 | 4 | 5 |
| 试验号 |
| 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 1 | 2 | 2 | 2 | 2 |
| 3 | 1 | 3 | 3 | 3 | 3 |
| 4 | 1 | 4 | 4 | 4 | 4 |
| 5 | 2 | 1 | 2 | 3 | 4 |
| 6 | 2 | 2 | 1 | 4 | 3 |
| 7 | 2 | 3 | 4 | 1 | 2 |
| 8 | 2 | 4 | 3 | 2 | 1 |
| 9 | 3 | 1 | 3 | 4 | 2 |
| 10 | 3 | 2 | 4 | 3 | 1 |
| 11 | 3 | 3 | 1 | 2 | 4 |
| 12 | 3 | 4 | 2 | 1 | 3 |
| 13 | 4 | 1 | 4 | 2 | 3 |
| 14 | 4 | 2 | 3 | 1 | 4 |
| 15 | 4 | 3 | 2 | 4 | 1 |
| 16 | 4 | 4 | 1 | 3 | 2 |

# L25（56）：6因素5水平

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 列号 | 1 | 2 | 3 | 4 | 5 | 6 |
| 试验号 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 1 | 2 | 2 | 2 | 2 | 2 |
| 3 | 1 | 3 | 3 | 3 | 3 | 3 |
| 4 | 1 | 4 | 4 | 4 | 4 | 4 |
| 5 | 1 | 5 | 5 | 5 | 5 | 5 |
| 6 | 2 | 1 | 2 | 3 | 4 | 5 |
| 7 | 2 | 2 | 3 | 4 | 5 | 1 |
| 8 | 2 | 3 | 4 | 5 | 1 | 2 |
| 9 | 2 | 4 | 5 | 1 | 2 | 3 |
| 10 | 2 | 5 | 1 | 2 | 3 | 4 |
| 11 | 3 | 1 | 3 | 5 | 2 | 4 |
| 12 | 3 | 2 | 4 | 1 | 3 | 5 |
| 13 | 3 | 3 | 5 | 2 | 4 | 1 |
| 14 | 3 | 4 | 1 | 3 | 5 | 2 |
| 15 | 3 | 5 | 2 | 4 | 1 | 3 |
| 16 | 4 | 1 | 4 | 2 | 5 | 3 |
| 17 | 4 | 2 | 5 | 3 | 1 | 4 |
| 18 | 4 | 3 | 1 | 4 | 2 | 5 |
| 19 | 4 | 4 | 2 | 5 | 3 | 1 |
| 20 | 4 | 5 | 3 | 1 | 4 | 2 |
| 21 | 5 | 1 | 5 | 4 | 3 | 2 |
| 22 | 5 | 2 | 1 | 5 | 4 | 3 |
| 23 | 5 | 3 | 2 | 1 | 5 | 4 |
| 24 | 5 | 4 | 3 | 2 | 1 | 5 |
| 25 | 5 | 5 | 4 | 3 | 2 | 1 |

# 9因素8水平

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **九因素八水平正交表** | | | | | | | | | |
|  | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** |
| **1** | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| **2** | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| **3** | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| **4** | 1 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| **5** | 1 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| **6** | 1 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| **7** | 1 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| **8** | 1 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| **9** | 2 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| **10** | 2 | 2 | 1 | 4 | 3 | 6 | 5 | 8 | 7 |
| **11** | 2 | 3 | 4 | 1 | 2 | 7 | 8 | 5 | 6 |
| **12** | 2 | 4 | 3 | 2 | 1 | 8 | 7 | 6 | 5 |
| **13** | 2 | 5 | 6 | 7 | 8 | 1 | 2 | 3 | 4 |
| **14** | 2 | 6 | 5 | 8 | 7 | 2 | 1 | 4 | 3 |
| **15** | 2 | 7 | 8 | 5 | 6 | 3 | 4 | 1 | 2 |
| **16** | 2 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| **17** | 3 | 1 | 3 | 6 | 8 | 2 | 4 | 5 | 7 |
| **18** | 3 | 2 | 4 | 5 | 7 | 1 | 3 | 6 | 8 |
| **19** | 3 | 3 | 1 | 8 | 6 | 4 | 2 | 7 | 5 |
| **20** | 3 | 4 | 2 | 7 | 5 | 3 | 1 | 8 | 6 |
| **21** | 3 | 5 | 7 | 2 | 4 | 6 | 8 | 1 | 3 |
| **22** | 3 | 6 | 8 | 1 | 3 | 5 | 7 | 2 | 4 |
| **23** | 3 | 7 | 5 | 4 | 2 | 8 | 6 | 3 | 1 |
| **24** | 3 | 8 | 6 | 3 | 1 | 7 | 5 | 4 | 2 |
| **25** | 4 | 1 | 4 | 8 | 5 | 6 | 7 | 3 | 2 |
| **26** | 4 | 2 | 3 | 7 | 6 | 5 | 8 | 4 | 1 |
| **27** | 4 | 3 | 2 | 6 | 7 | 8 | 5 | 1 | 4 |
| **28** | 4 | 4 | 1 | 5 | 8 | 7 | 6 | 2 | 3 |
| **29** | 4 | 5 | 8 | 4 | 1 | 2 | 3 | 7 | 6 |
| **30** | 4 | 6 | 7 | 3 | 2 | 1 | 4 | 8 | 5 |
| **31** | 4 | 7 | 6 | 2 | 3 | 4 | 1 | 5 | 8 |
| **32** | 4 | 8 | 5 | 1 | 4 | 3 | 2 | 6 | 7 |
| **33** | 5 | 1 | 5 | 2 | 6 | 7 | 3 | 8 | 4 |
| **34** | 5 | 2 | 6 | 1 | 5 | 8 | 4 | 7 | 3 |
| **35** | 5 | 3 | 7 | 4 | 8 | 5 | 1 | 6 | 2 |
| **36** | 5 | 4 | 8 | 3 | 7 | 6 | 2 | 5 | 1 |
| **37** | 5 | 5 | 1 | 6 | 2 | 3 | 7 | 4 | 8 |
| **38** | 5 | 6 | 2 | 5 | 1 | 4 | 8 | 3 | 7 |
| **39** | 5 | 7 | 3 | 8 | 4 | 1 | 5 | 2 | 6 |
| **40** | 5 | 8 | 4 | 7 | 3 | 2 | 6 | 1 | 5 |
| **41** | 6 | 1 | 6 | 4 | 7 | 3 | 8 | 2 | 5 |
| **42** | 6 | 2 | 5 | 3 | 8 | 4 | 7 | 1 | 6 |
| **43** | 6 | 3 | 8 | 2 | 5 | 1 | 6 | 4 | 7 |
| **44** | 6 | 4 | 7 | 1 | 6 | 2 | 5 | 3 | 8 |
| **45** | 6 | 5 | 2 | 8 | 3 | 7 | 4 | 6 | 1 |
| **46** | 6 | 6 | 1 | 7 | 4 | 8 | 3 | 5 | 2 |
| **47** | 6 | 7 | 4 | 6 | 1 | 5 | 2 | 8 | 3 |
| **48** | 6 | 8 | 3 | 5 | 2 | 6 | 1 | 7 | 4 |
| **49** | 7 | 1 | 7 | 5 | 3 | 8 | 2 | 4 | 6 |
| **50** | 7 | 2 | 8 | 6 | 4 | 7 | 1 | 3 | 5 |
| **51** | 7 | 3 | 5 | 7 | 1 | 6 | 4 | 2 | 8 |
| **52** | 7 | 4 | 6 | 8 | 2 | 5 | 3 | 1 | 7 |
| **53** | 7 | 5 | 3 | 1 | 7 | 4 | 6 | 8 | 2 |
| **54** | 7 | 6 | 4 | 2 | 8 | 3 | 5 | 7 | 1 |
| **55** | 7 | 7 | 1 | 3 | 5 | 2 | 8 | 6 | 4 |
| **56** | 7 | 8 | 2 | 4 | 6 | 1 | 7 | 5 | 3 |
| **57** | 8 | 1 | 8 | 7 | 2 | 4 | 5 | 6 | 3 |
| **58** | 8 | 2 | 7 | 8 | 1 | 3 | 6 | 5 | 4 |
| **59** | 8 | 3 | 6 | 5 | 4 | 2 | 7 | 8 | 1 |
| **60** | 8 | 4 | 5 | 6 | 3 | 1 | 8 | 7 | 2 |
| **61** | 8 | 5 | 4 | 3 | 6 | 8 | 1 | 2 | 7 |
| **62** | 8 | 6 | 3 | 4 | 5 | 7 | 2 | 1 | 8 |
| **63** | 8 | 7 | 2 | 1 | 8 | 6 | 3 | 4 | 5 |
| **64** | 8 | 8 | 1 | 2 | 7 | 5 | 4 | 3 | 6 |