Practical Numbers and Simple BIBDs with Number of Elements a Prime Power

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A practical number is a positive integer m such that every number less than m can be represented as a sum of distinct divisors of m. We apply the properties of practical numbers in the existence theorem for simple BIBDs. Let q be a power of an odd prime. We show that the necessary conditions are also sufficient for the existence of a simple BIBD with q elements when certain conditions regarding practical numbers are satisfied.