



**Key words:** powder metallurgy, aluminum, magnesium, composite, sintering, mechanical properties.

## Introduction

Aluminum (Al) is a light metal with a density of approximately 2.7 g/cm<sup>3</sup>. It has good electrical and thermal conductivity, and is widely used in various industries. However, Al has low mechanical strength and ductility, which limits its applications. To improve the mechanical properties of Al, it can be combined with other metals or non-metals to form composites. One such composite is the Al-Mg composite, which contains magnesium (Mg) as a reinforcement phase. Mg is a light metal with a density of approximately 1.74 g/cm<sup>3</sup>, and it has high strength and ductility. When Mg is added to Al, it forms a solid solution, which improves the mechanical properties of the resulting composite. The addition of Mg to Al can also improve the casting and sintering properties of the composite. In this study, we investigated the effect of Mg content on the mechanical properties of Al-Mg composites prepared by sintering.

## **Material and experimental**

E e imen al e and mea emen oced e

Re l and Di c ion

