



Fig. 3. Recoverability of the ZrP_2O_7 nanoparticles for synthesis **5e**.

4. Conclusions

In conclusion, we have developed a straightforward and efficient approach to synthesis of 2-aryl-5-methyl-2,3-dihydro-1H-3-pyrazolones by a simple one-pot four-component reaction of phenyl hydrazines, ethyl acetoacetate, β -naphthol and benzaldehydes in the presence of ZrP_2O_7 nanoparticles as catalyst under microwave irradiation. This 'green' procedure can synthesize new substituted pyrazolone scaffolds. The advantages offered by this method include, easy workup, the employment of a cost-effective catalyst, short reaction times, excellent yields and use of microwave irradiation.

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