

Makale başlığınızı yalnızca ilk harf büyük olacak şekilde yazınız

|  |  |  |
| --- | --- | --- |
| MAKALE BİLGİSİ |  | ÖZET (MAKSİMUM 250 KELİME) |
| Makale Geçmişi:  Geliş  Kabul  Çevrimiçi mevcut |  | Aaaa aaaa aaaa aaaa aaaa aaaa aaaa aaaa aaaa aaaa aaaa aaaa aaaaa aaaaaa aaaaa aaaa aaaa aaaa aaaa aaaaa aaaa aaa aaaaaa aaaaa aaaaa aa aaaa aaaaaa aaaa aaa aaaaaaa aa aaaaaaa aa aaaaaaa aaaaa aaaaa aaaaa aaa aaaaaaa aaaaa aaaaaa aaaa aa aaaaa aaa aa aaaaa aaaa aaaaa aaaaa aaa aaaaa aaaaaa aaa aaa aaa aaa aaaa aaaa aaa aaaaa aa aaaaaa aaaaaa aaaa aaaaa aaa aaaa aaa aaaa aaa aaaa aaaaaa aaaaaaa aaaaa aaaaa aaa aaaaaa aaaa aaaaaa aaaa aaaaaaa aa aaaaa aaaaa aaaaa aaaa aaaaa aaaa aaaaa aaa aaaa aaaaaa aaaaaa aaa aaaa aaaa aaaa aaaaa aaa aaa aaa aaaaa aaaa aaaa aaaaa aaaaa aaaaa aaaa aaaaa aaaaa aaaaa aaaaa aaaaaa aaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaaa aaaaaaa aaaaaaa aaaaaaa aaaaaaa aaaa aaa aaaa aaaaaaa aaaaa aaaaaa aaaaaa aaaaaaa aaaa aaa aaaaaaa aaaaaaa aaaa aaaaaaa aaaa aaaaa aaaaaa aaaaaa aaaaaaa aaaa aaaa aaaaa aaaa aaaaa aaaaa aa aaaa aaaaaa aaaaaaa aaaaaaa aaaa aaaa aaaa aaa aaaa aaaa aaaa aaaa aaaa aaaaaaaa aaaaa aaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaa aaaaa aaaaa aaaaaa aaaaaa aaaaaa aaaaaa aaaaaa aaaaaa aaa aaaaa aaaa aaaaa aaaaa aaaaa aaaaaa aaaa aaaa aaaa aaaa aaaa aaaa aaaa aaaa aaaa aaaa aaaaa aaaaaa aaaa aaaaaa aa aaaaa aaaaaa aaaaa aaaa aaaaa aaaa aaaa aaaa aaaaa aaaaaa aaaa aaaaa aa aaaa aaaa aaaa aa aaaa aaaaa aaa aaaaa aaaa aaa aaa aaaa aaaa aaaa aaaa aa aaaa aa aaaaaaa aa aaaaa aaaaaaa aaaaa aaa aaaa aa aaaaaaa aaaaa aaaa aaa aaaa aaaa aaaa aaaa aaaa aaaa aaa aaa aa aaaa aaaa aaaa aaaa aaaa aaa aa aaaaa aaaa aaaaa aaaa aaaa aaaaa aaaaa aaaaa aaaa aaaaa aaaa aaaa aaaa aaaa aaaaa aaaaa aaaaaaa aaaaaaa aa aaaa aaaa aaaaa aaaaa aaaa aaaa aaaa aaaa aaa aaaa aaa aa aaaa aaaa aaaaa. |
| *Anahtar Kelimeler:*  Anahtar kelime\_1  Anahtar kelime \_2  Anahtar kelime \_3  Anahtar kelime \_4 |  |

Click & type the title of your paper, only capitalize first word and proper

|  |  |  |
| --- | --- | --- |
| ARTICLE INFO |  | ABSTRACT (MAXIMUM 300 WORDS) |
| Article history:  Received  Accepted  Available online |  | Aaaa aaaa aaaa aaaa aaaa aaaa aaaa aaaa aaaa aaaa aaaa aaaa aaaaa aaaaaa aaaaa aaaa aaaa aaaa aaaa aaaaa aaaa aaa aaaaaa aaaaa aaaaa aa aaaa aaaaaa aaaa aaa aaaaaaa aa aaaaaaa aa aaaaaaa aaaaa aaaaa aaaaa aaa aaaaaaa aaaaa aaaaaa aaaa aa aaaaa aaa aa aaaaa aaaa aaaaa aaaaa aaa aaaaa aaaaaa aaa aaa aaa aaa aaaa aaaa aaa aaaaa aa aaaaaa aaaaaa aaaa aaaaa aaa aaaa aaa aaaa aaa aaaa aaaaaa aaaaaaa aaaaa aaaaa aaa aaaaaa aaaa aaaaaa aaaa aaaaaaa aa aaaaa aaaaa aaaaa aaaa aaaaa aaaa aaaaa aaa aaaa aaaaaa aaaaaa aaa aaaa aaaa aaaa aaaaa aaa aaa aaa aaaaa aaaa aaaa aaaaa aaaaa aaaaa aaaa aaaaa aaaaa aaaaa aaaaa aaaaaa aaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaaa aaaaaaa aaaaaaa aaaaaaa aaaaaaa aaaa aaa aaaa aaaaaaa aaaaa aaaaaa aaaaaa aaaaaaa aaaa aaa aaaaaaa aaaaaaa aaaa aaaaaaa aaaa aaaaa aaaaaa aaaaaa aaaaaaa aaaa aaaa aaaaa aaaa aaaaa aaaaa aa aaaa aaaaaa aaaaaaa aaaaaaa aaaa aaaa aaaa aaa aaaa aaaa aaaa aaaa aaaa aaaaaaaa aaaaa aaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaaa aaaa aaaaa aaaaa aaaaaa aaaaaa aaaaaa aaaaaa aaaaaa aaaaaa aaa aaaaa aaaa aaaaa aaaaa aaaaa aaaaaa aaaa aaaa aaaa aaaa aaaa aaaa aaaa aaaa aaaa aaaa aaaaa aaaaaa aaaa aaaaaa aa aaaaa aaaaaa aaaaa aaaa aaaaa aaaa aaaa aaaa aaaaa aaaaaa aaaa aaaaa aa aaaa aaaa aaaa aa aaaa aaaaa aaa aaaaa aaaa aaa aaa aaaa aaaa aaaa aaaa aa aaaa aa aaaaaaa aa aaaaa aaaaaaa aaaaa aaa aaaa aa aaaaaaa aaaaa aaaa aaa |
| Keywords:  Keywords\_1  Keywords\_2  Keywords\_3  Keywords\_4 |  |

**1.Giriş**

Aaaa,aaaa aaa aaaa aaaaa aaaaa aaaa aaaa aaaaaa aaaaa aaaaaa aaaaa aaaa aaaaaa aa aaaa aaaa aaaa aaaa aaaa aaaa aaaa aaaa aaaaaa aa aaaa aaaaaaaa aaaaaaaaa aaaaaaaaaa aaaaaa aaaa aaaaaa aaaaa aaaaa aa aaaa aaaaa aaaaa aaaaa aaaaa aaaaaa aa aaaa aaa aaaaa aaaa aaaaa aaaaa aaaaa aaaa aaaaa aaaa aaaaa aaaa aaaaa aa aaaa aaaa aaaaa aaaa aaa aaaa aaaa aaaa aaaa aaaaaa aaaa aa aaaaa aaaaa aaa aaaaa aaaaa aaaa aaaa aaa aaaa aaaa aaaa aaaa aa aa aaaa aaaaa aaaa aa aaaa aaaa aa aaaaa aaaaaa aaaa aaaa aaaa aaaaaaa aaa aaaa aaaa aaaaaa aaa aa aaaa aaaa aaa aa aaaaaaa aaa aaaaaa aa aaaaaaaa aaa aaaa (Ilyas ve Sapuan, 2020; Ceraulo ve ark., 2022).

Aaaa,aaaa aaa aaaa aaaaa aaaaa aaaa aaaa aaaaaa aaaaa aaaaaa aaaaa aaaa aaaaaa aaaaaa aaaa aaaa aaaa aaaa aaaa aaaa aaaa aaaaaa aaaaaa aaaaaaaa aaaaaaaaa aaaaaaaaaa aaaaaa aaaa aaaaaa aaaaa aaaaa aa aaaa aaaaa aaaaa aaaaa aaaaa aa aaaa aaaaaa aaa aaaaa aaaa aaaaa aaaaa aaaaa aaaa aaaaa aaaa aaaaa aaaa aaaaa aa aaaa aaaa aaaaa aaaa aaa aaaa aaaa aaaa aaaa aaaa aaaaa aaaa aa aaaa aaaa aa aaaaa aaaaaa aaaa aaaa aaaa aaaaaaa aaa aaaa aaaa aaaaaa aaa aa aaaa aaaa aaa aa aaa aaaa aaa aaaaaa aa aaa aaaaa aaaa aaaaa aaaaa aaaa aaaaaa aaaaa aaa aaaaa aa aaa aaaaaa aa aaaa aaaa aaa aaaa (Müssig, 2008).

Müssig (2008), aaaaa aaaa aaaa aaaa aaaa aaaa aaaaaa aaaaaa aaaaaaaa aaaaaaaaa aaaaaaaaaa aaaaaa aaaa aaaaaa aaaaa aaaaa aa aaaa aaaaa aaaaa aaaaa aaaaa aa aaaa aaaaaa aaa aaaaa aaaa aaaaa aaaaa aaaaa aaaa aaaaa Ahmad ve ark. (2022) aaaa aaaaa aaaa aaaaa aa aaaa aaaa aaaaa aaaa aaa aaaa aaaa aaaa aaaa aaaa aaaaa aaaa aa aaaa aaaa aa aaaaa aaaaaa aaaa aaaa aaaa aaaaaaa aaa aaaa aaaa aaaaaa aaa aa aaaa aaaa aaa aa aaa aaaa aaa.

**2. Materyal ve Metot**

Aaaa aa aaaaaa aaaa aaaa aaaa aaa aaaaa aaaa aaaa aaa aaaa aaaaa aaa aaaaa aaaa aaa aaaa aaa aa aaaa aaa aaaa aa aaaaaa aaaa aaaa aaaa aaaa aaaa aaaa aaaaaa aaaaaa aaaaaaaa aaaaaaaaa aaaaaaaaaa aaaaaa aaaa aaaaaa aaaaa aaaaa aa aaaa aaaaa aaaaa aaaaa aaaaa aa aaaa aaaaaa aaa aaaaa aaaa aaaaa aaaaa aaaaa aaaa aaaaa aaaa aaaaa aaaa aaaaa aa aaaa aaaa aaaaa aaaa aaa aaaa aaaa aaaa aaaa aaaa aaaaa aaaa aa aaaa aaaa aaaa aaaa aaaa aaaa aaaaaa aaaaaa aaaaaaaa aaaaaaaaa aaaaaaaaaa aaaaaa aaaa aaaaaa aaaaa aaaaa aa aaaa aaaaa aaaaa aaaaa aaaaa aa aaaa aaaaaa aaa aaaaa aaaa aaaaa aaaaa aaaaa aaaa aaaaa aaaa aaaaa aaaa aaaaa aa aaaa aaaa aaaaa aaaa aaa aaaa aaaa aaaa aaaa aaaa aaaaa aaaa aa aaaa.

Aaaa aa aaaaaa aaaa aaaa aaaa aaa aaaaa aaaa aaaa aaa aaaa aaaaa aaa aaaaa aaaa aaa aaaa aaa aa aaaa aaa aaaa aa aaaaaa aaaa aaaa aaaa aaaa aaaa aaaa aaaaaa aaaaaa aaaaaaaa aaaaaaaaa aaaaaaaaaa aaaaaa aaaa aaaaaa aaaaa aaaaa aa aaaa aaaaa aaaaa aaaaa aaaaa aa aaaa aaaaaa aaa aaaaa aaaa aaaaa aaaaa aaaaa aaaa aaaaa aaaa aaaaa aaaa aaaaa aa aaaa aaaa aaaaa aaaa aaa aaaa aaaa aaaa aaaa aaaa aaaaa aaaa aa aaaa aaaa aaaa aaaa aaaa aaaa aaaaaa aaaaaa aaaaaaaa aaaaaaaaa aaaaaaaaaa aaaaaa aaaa aaaaaa aaaaa aaaaa aa aaaa aaaaa aaaaa aaaaa aaaaa aa aaaa aaaaaa aaa aaaaa aaaa aaaaa aaaaa aaaaa aaaa aaaaa aaaa aaaaa aaaa aaaaa aa aaaa aaaa aaaaa aaaa aaa aaaa aaaa aaaa aaaa aaaa aaaaa aaaa aa aaaa

***2.1 Malzemeler ve Hazırlama Teknikleri***

Aaaa aa aaaaaa aaaa aaaa aaaa aaa aaaaa aaaa aaaa aaa aaaa aaaaa aaa aaaaa aaaa aaa aaaa aaa aa aaaa aaa aaaa aa aaaaaa aaaa aaaa aaaa aaaa aaaa aaaa aaaaaa aaaaaa aaaaaaaa aaaaaaaaa aaaaaaaaaa aaaaaa aaaa aaaaaa aaaaa aaaaa aa aaaa aaaaa aaaaa aaaaa aaaaa aa aaaa aaaaaa aaa aaaaa aaaa aaaaa aaaaa aaaaa aaaa aaaaa aaaa aaaaa aaaa aaaaa aa aaaa aaaa aaaaa aaaa aaa aaaa aaaa aaaa aaaa aaaa aaaaa aaaa aa aaaa aaaa aaaa aaaa aaaa aaaa aaaaaa aaaaaa aaaaaaaa aaaaaaaaa aaaaaaaaaa aaaaaa aaaa aaaaaa aaaaa aaaaa aa aaaa aaaaa aaaaa aaaaa aaaaa aa aaaa aaaaaa aaa aaaaa aaaa aaaaa aaaaa aaaaa aaaa aaaaa aaaa aaaaa aaaa aaaaa aa aaaa aaaa aaaaa aaaa aaa aaaa aaaa aaaa aaaa aaaa aaaaa aaaa aa aaaa

***2.1.1. Malzemelerin Karakterizasyonu***

Aaaa aa aaaaaa aaaa aaaa aaaa aaa aaaaa aaaa aaaa aaa aaaa aaaaa aaa aaaaa aaaa aaa aaaa aaa aa aaaa aaa aaaa aa aaaaaa aaaa aaaa aaaa aaaa aaaa aaaa aaaaaa aaaaaa aaaaaaaa aaaaaaaaa aaaaaaaaaa aaaaaa aaaa aaaaaa aaaaa aaaaa aa aaaa aaaaa aaaaa aaaaa aaaaa aa aaaa aaaaaa aaa aaaaa aaaa aaaaa aaaaa aaaaa aaaa aaaaa aaaa aaaaa aaaa aaaaa aa aaaa aaaa aaaaa aaaa aaa aaaa aaaa aaaa aaaa aaaa aaaaa aaaa aa aaaa aaaa aaaa aaaa aaaa aaaa aaaaaa aaaaaa aaaaaaaa aaaaaaaaa aaaaaaaaaa aaaaaa aaaa aaaaaa aaaaa aaaaa aa aaaa aaaaa aaaaa aaaaa aaaaa aa aaaa aaaaaa aaa aaaaa aaaa aaaaa aaaaa aaaaa aaaa aaaaa aaaa aaaaa aaaa aaaaa aa aaaa aaaa aaaaa aaaa aaa aaaa aaaa aaaa aaaa aaaa aaaaa aaaa aa aaaa.

Aaaa aa aaaaaa aaaa aaaa aaaa aaa aaaaa aaaa aaaa aaa aaaa aaaaa aaa aaaaa aaaa aaa aaaa aaa aa aaaa aaa aaaa aa aaaaaa aaaa aaaa aaaa aaaa aaaa aaaa aaaaaa aaaaaa aaaaaaaa aaaaaaaaa aaaaaaaaaa aaaaaa aaaa aaaaaa aaaaa aaaaa aa aaaa aaaaa aaaaa aaaaa aaaaa aa aaaa aaaaaa aaa aaaaa aaaa aaaaa aaaaa aaaaa aaaa aaaaa aaaa aaaaa aaaa aaaaa aa aaaa aaaa aaaaa aaaa aaa aaaa aaaa aaaa aaaa aaaa aaaaa aaaa aa aaaa aaaa aaaa aaaa aaaa aaaa aaaaaa aaaaaa aaaaaaaa aaaaaaaaa aaaaaaaaaa aaaaaa aaaa aaaaaa aaaaa aaaaa aa aaaa aaaaa aaaaa aaaaa aaaaa aa aaaa aaaaaa aaa aaaaa aaaa aaaaa aaaaa aaaaa aaaa aaaaa aaaa aaaaa aaaa aaaaa aa aaaa aaaa aaaaa aaaa aaa aaaa aaaa aaaa aaaa aaaa aaaaa aaaa aa aaaa.

***2.2. Denklem Ekleme ve Numaralandırma***

Denklemler metin içerisinde “Eş. (1), Eş. (2)” şeklinde verilmelidir. Formüller Mathtype veya Microsoft denklem düzenleyicisi kullanılarak yazılmalıdır.

|  |  |
| --- | --- |
|  | (1) |

|  |  |
| --- | --- |
|  | (2) |

***2.3 Birimler***

Metin, şekil ve tablolarda SI birim sistemi kullanılmalıdır. Örneğin " saniye" yerine "s", "metre" yerine "m" birimleri kullanılmalıdır.

***2.3 Tablolar ve Şekiller***

Tabloların isimleri tablonun üst kısmında yer almalıdır (Cambria ve 8 Point). Lütfen tablolarda dikey çizgi kullanmaktan kaçının. Değişkenlerin yazı tipi "kalın" olmalıdır. Varsa birimler “italik” olmalı ve bir satır altta parantez içinde gösterilmelidir.

**Tablo 1.** Tablo örneği

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Numune** | **ΔHm**  *(J/g)* | **ΔHom**  *(J/g)* | **δe**  *(mJ/m2)* | **Tm**  *(oC)* | **Tom**  *(oC)* | **Xc**  *(%)* | **λ**  *(nm)* |
| A1 | 150 | 293 | 90 | 134,1 | 146 | 55 | 13,80 |
| A2 | 208 | 238 | 90 | 135,8 | 146 | 70 | 12,57 |
| A3 | 816 | 357 | 90 | 136,2 | 146 | 73 | 12,53 |
| A4 | 321 | 229 | 90 | 137,6 | 146 | 75 | 14,16 |

Şekiller JPEG formatında yüklenmelidir. Şekil başlıkları şeklin altında Cambria ve 8 punto şeklinde yazılmalıdır. Şekiller makale metni içerisinde yer almalıdır. Şekillerin çözünürlüğü en az 300 DPI olmalıdır. Gerektiğinde şekil içinde şekil gösterimi yapılabilir. Şekilde kullanılan yazı tipi boyutu makalede kullanılan yazı boyutundan büyük olmamalıdır. Şekilde kullanılan yazı tipi Cambria olmalıdır. Şekillerin dışında kenarlık kullanmaktan kaçının.



**Figure 1.** Figure example **(a)** aaaaaa **(b)** aaaaaaaaa

**3. Bulgular ve Tartışma**

Elde edilen veriler açık ve net bir şekilde sunulmalıdır. Elde edilen tüm veriler literatürle karşılaştırılmalıdır.

**4. Sonuçlar**

Araştırmanın ana sonuçları kısaca sunulmalıdır.

**Teşekkür (zorunlu alan)**

Bu bölümde çalışmaya katkıda bulunan kişiler, fonlar, bağışlar, proje destek ve teşekkür beyanları belirtilmelidir.

Bu çalışma …………….. tarafından desteklenmiştir (Proje numarası ………).

Çalışma bir tezden üretilmişse bu bilginin burada verilmesi gerekmektedir. Örneğin bu makale Düzce Üniversitesi Lisansüstü Eğitim Enstitüsü Tarım Makinaları Anabilim Dalı'nda tamamlanan bir doktora tezinden üretilmiştir.

**Yazarların Katkı Oranları (zorunlu alan)**

Yazarların çalışmaya katkıları aşağıdaki şekilde açıkça belirtilmelidir:

A.B. (Yazar adının baş harfleri. Yazar soyadının baş harfleri): makalenin yazılması, deney düzeneğinin oluşturulması ve deneylerin yapılması.

C.D.: Literatür araştırması ve verilerin istatistiksel hesaplamaları.

E.F.: Bulguların yorumlanması, literatür araştırması ve deney için gerekli malzemelerin temin edilmesi.

Yazarlar yukarıda belirtilen konularda çalışmaya katkı sağladıklarını beyan ederler.

**Çıkar Çatışması Beyanı (zorunlu alan)**

Herhangi bir çıkar çatışması yoktur.

**Kaynaklar**

Ahmad, H., Chhipi-Shrestha, G., Hewage, K., & Sadiq, R. (2022). A Comprehensive review on construction applications and life cycle sustainability of natural fiber biocomposites. *Sustainability*, 14(23): 15905. <https://doi.org/10.3390/su142315905>

Akampumuza, O., Wambua, P. M., Ahmed, A., Li, W., & Qin, X. H. (2016). Review of the applications of biocomposites in the automotive industry. *Polymer Composites*, 38(11): 2553–2569. <https://doi.org/10.1002/pc.23847>

Bhat, A.H., Dasan, Y.K., Khan, I., & Jawaid, M. (2017). Cellulosic Biocomposites: Potential Materials for Future. In: M. Jawaid, M. Salit & O. Alothman (Eds.), *Green Biocomposites. Green Energy and Technology* (pp. 69-100*)*. Springer, Cham. <https://doi.org/10.1007/978-3-319-49382-4_4>

Ceraulo, M., La Mantia, F. P., Mistretta, M. C., & Titone, V. (2022). The use of waste hazelnut shells as a reinforcement in the development of green biocomposites. *Polymers*, 14(11): 2151. <https://doi.org/10.3390/polym14112151>

Ilyas, R. A., & Sapuan, S. M. (2020). Biopolymers and biocomposites: chemistry and technology. *Current Analytical Chemistry*, 16(5): 500–503. <https://doi.org/10.2174/157341101605200603095311>

**To cite:** Avşar, Y., & Çevik, B. 2023. Investigation of agricultural wastes used as reinforcement in biocomposite production and agricultural waste potential in Turkey. *Journal of Agriculture Faculty of Düzce University*, 1(1):15-25.

**Alıntı için:** Avşar, Y., & Çevik, B. 2023. Biyokompozit üretiminde takviye elemanı olarak kullanılan tarımsal atıkların incelenmesi ve Türkiye’deki tarımsal atık potansiyeli. *Düzce Üniversitesi Ziraat Fakültesi Dergisi*, 1(1):15-25.

Müssig, J. (2008). Cotton fibre-reinforced thermosets versus ramie composites: a comparative study using petrochemical- and agro-based resins. *Journal of Polymers and the Environment*, 16(2): 94–102. <https://doi.org/10.1007/s10924-008-0089-4>