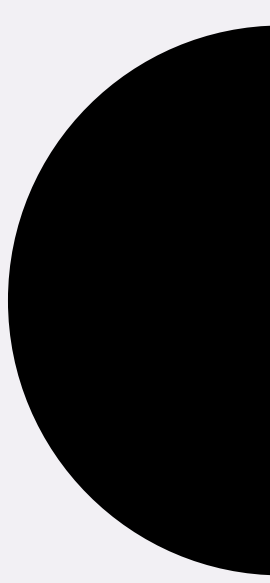


**TTEEB**

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OFFICIAL DOCUMENT

# SMART CONTRACT CODE REVIEW AND SECURITY ANALYSIS REPORT

PROJECT:

**Artistokens**

June 11, 2022

tteb.finance



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# Overview

This audit has been prepared for **Artistokens** to review the main aspects of the project and help investors make an informed decision in the research process.



# Disclaimer

**This audit is only to the Smart-Contract code at the specified address.**

**TTEB Finance is a 3rd party auditing company that works on audits based on client requests. And as a professional auditing firm, we check on the contract for any vulnerabilities, backdoors, and/or scam scripts.**

**Any concerns about the project themselves need to be raised directly to the project owners and not through TTEB Finance.**

**Investors are not in any way obliged, coerced or influenced to invest in projects audited by TTEB Finance.**

**NOTE: We ONLY consider a project safe if they receive our "Certificate of Trust" NFT. This report only points out any potential red flags found in our analysis. Always do your own research before investing in a project.**

# Smart Contract Review

*The contract review process pays special attention to the following:*

- Testing the smart contract against both common and uncommon vulnerabilities
- Accessing the codebase to ensure compliance with current best practices and industry standards.
- Cross referencing contract structure and implementation against similar smart contracts produced by industry leaders.
- Ensuring contract logic meets the specifications and intentions of client.
- Thorough line-by-line manual of the entire codebase by our experienced team.



# Smart Contract Summary

CONTRACT NAME	Artistokens
TICKER	Art
CONTRACT ADDRESS	<u><a href="#">0XDC007945CE4C2073E89871B4583ABBA3C19B6A08</a></u>
NETWORK	BNB SMART CHAIN
LANGUAGE	SOLIDITY
TAX	REFLECTION FEE : 3% LIQUIDITY FEE : 2% CHARITY FEE : 10%
TOTAL SUPPLY	500,000,000,000
STATUS	NOT LAUNCHED YET

## Contract Stats

BURN	No burn
LP ADDRESS	Art/BNB : 0xa14f56DB62f52F7364387e6c40436c6e7458D955
CREATION DATE	Jun-06-2022 12:46:10 PM +UTC

## Featured Wallets

OWNER ADDRESS	0x1e609e7B9aD0809aa779154321340c10bB618e63
CHARITY ADDRESS	0x600ce87359433faf990aca9216faddd3beb5dfd6



# Issues

Oracle calls	Passed ✓
Front running	Passed ✓
Design logic	Passed ✓
Compiler warnings	Passed ✓
DoS with (Unexpected) Throw	Passed ✓
Economy model	Passed ✓
Malicious event log	Passed ✓
Arithmetic accuracy	Passed ✓
Safe Zeppelin module	Passed ✓
Timestamp dependence	Passed ✓
DoS with block gas limit	Passed ✓

# Issues

Methods execution permissions	Passed ✓
Scoping and declarations	Passed ✓
Private user data leaks	Passed ✓
Integer Overflow and Underflow	Passed ✓
Uninitialized storage pointers	Passed ✓
Cross-function race conditions	Passed ✓
Possible delays in data delivery	Passed ✓
The impact of the exchange rate on the logic	Passed ✓
ERC20 API violation	Passed ✓
Race conditions and Reentrancy	Passed ✓
Fallback function security	Passed ✓

# Findings

CRITICAL ISSUES(critical, high severity)	0
HIGH ISSUES(high, medium severity)	1
ERRORS, WARNINGS(medium, low severity)	1
OPTIMIZATION(low severity)	0
RECOMMENDATIONS(very low severity)	0

## HIGH ISSUE

In the contract, the role **\_owner** has authority over the functions **setSwapAndLiquifyEnabled**, **setTaxFeePercent**, **includeInFee**, **excludeFromFee**, **includeInReward**, **excludeFromReward**, **transferOwnership** and **renounceOwnership**. Any compromise to the **\_owner** account may allow the hacker to take advantage of this authority.



## Recommendations

Here are some feasible suggestions that would also mitigate the potential risk in terms of short-term, long-term and permanent:

- **Short Term:** Timelock and Multi sign ( $\frac{2}{3}$ ,  $\frac{3}{5}$ ) combination to avoid a single point of key management failure. Time-lock with reasonable latency, e.g., 48 hours, for awareness on privileged operations; AND assignment of privileged roles to multi-signature wallets to prevent a single point of failure due to the private key being compromised; AND a medium/blog link for sharing the timelock contract and multi-signers addresses information with the public audience.
- **Long Term:** Timelock and DAO, the combination, mitigate by applying decentralization and transparency. Time-lock with reasonable latency, e.g., 48 hours, for awareness on privileged operations; AND Introduction of a DAO/governance/voting module to increase transparency and user involvement. AND a medium/blog link for sharing the timelock contract, multi-signers addresses, and DAO information with the public audience.
- **Permanent:** Renouncing contract ownership and never claim back the privileged roles.



## Centralization Risk

The `_initSupply` tokens are sent to the contract deployer when deploying the contract. This could be a centralization risk as the deployer can distribute the tokens without obtaining the consensus of the community.

### Recommendation

We recommend the team to be transparent regarding the initial token distribution process, and the team shall make enough efforts to restrict the access of the private key.

### Alleviation

The Artistokens team acknowledged this finding.





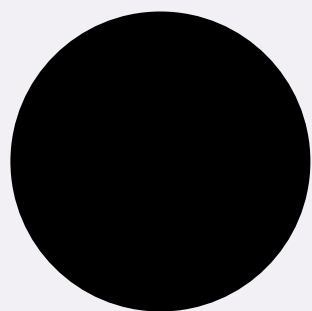
# Conclusion

Our team performed an analysis of the Artistokens code functionality, manual audit, and automated checks. All issues found during automated analysis were manually reviewed, and important vulnerabilities are presented in the Audit findings section.

Security engineers found 2 medium issues during the first review. The Artistokens Smart-Contract contains no backdoors, and no scam scripts.

The code was tested with compatible compilers and manually reviewed for all commonly known and specific vulnerabilities.

Artistokens Smart-Contract is safe for use on the BNB Smart Chain MainNet network.



# About TTEB.Finance

*TietoEVERY is a team of crypto security experts that have been performing full audits for projects, to help people make informed decisions about crypto investing.*

*TietoEVERY primarily focuses on identifying scams and high-risk projects to prevent monetary loss to new and inexperienced crypto investors through our auditing services and utility token, \$TTEB*

- Website: <https://tteb.finance>
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***If you are interested in finding out more about our audits and "Certificate of Trust" NFTs, reach out to [hello@tteb.finance](mailto:hello@tteb.finance)***