CFG NINJA

SECURITY ASSESSMENT

Sucre Finance TOKEN

September 3, 2024

Audit Status: Pass

BLADE POOL

RISK ANALYSIS | Sucre Finance.

Classifications of Manual Risk Results

Classification	Description
Critical	Danger or Potential Problems.
High	Be Careful or Fail test.
Medium	Improve is needed.
Low	Pass, Not-Detected or Safe Item.
Informational	Function Detected

Manual Code Review Risk Results

Contract Security	Description
Buy Tax	8%
Sale Tax	8%
Cannot Buy	Pass
Cannot Sale	Pass
Max Tax	8%
Modify Tax	Yes
Fee Check	Pass
Is Honeypot?	Not Detected
Trading Cooldown	Not Detected
Enable Trade?	True
Pause Transfer?	Not-Detected

Contract Security	Description
Max Tx?	Pass
Is Anti Whale?	Detected
Is Anti Bot?	Detected
Is Blacklist?	Not-Detected
Blacklist Check	Pass
is Whitelist?	Detected
Can Mint?	Pass
Is Proxy?	Not Detected
Can Take Ownership?	Not Detected
Hidden Owner?	Not-Detected
Owner	0x112C91C5ab1FC5ACF7A8505157751A96Dc2c966a
Self Destruct?	Not Detected
External Call?	Detected
Other?	Not Detected
Holders	1
Audit Confidence	Medium
Authority Check	Pass
Freeze Check	Pass

The summary section reveals the strengths and weaknesses identified during the assessment, including any vulnerabilities or potential risks that may exist. It serves as a valuable snapshot of the overall security status of the audited project. However, it is highly recommended to read the entire security assessment report for a comprehensive understanding of the findings. The full report provides detailed insights into the assessment process, methodology, and specific recommendations for addressing the identified issues.

CFG Ninja Verified on September 3, 2024

Sucre Finance

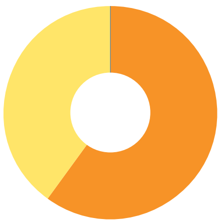
Executive Summary

TYPES	ECOSYSTEM	LANGUAGE
DeFi	ETHEREUM	Solidity

Timeline

Audit Request	Onboarding Process	Audit Preview	Audit Release
2024-09-03	2024-09-03	2024-09-03	2024-09-03

Vulnerability Summary



5	0	5	5
Total Findings	Resolved	Pending	Unresolved

0 Critical		Critical risks are the most severe and can have a significant impact on the smart contracts functionality, security, or the entire system. These vulnerabilities can lead to the loss of user funds, unauthorized access, or complete system compromise.
0 High		High-risk vulnerabilities have the potential to cause significant harm to the smart contract or the system. While not as severe as critical risks, they can still result in financial losses, data breaches, or denial of service attacks.
3 Medium	0 Resolved, 3 Pending	Medium-risk vulnerabilities pose a moderate level of risk to the smart contracts security and functionality. They may not have an immediate and severe impact but can still lead to potential issues if exploited. These risks should be addressed to ensure the contracts overall security.
2 Low	0 Resolved, 2 Pending	Low-risk vulnerabilities have a minimal impact on the smart contracts security and functionality. They may not pose a significant threat, but it is still advisable to address them to maintain a robust security posture.
0 Informational		Informational risks are not actual vulnerabilities but provide useful information about potential improvements or best practices. These findings may include suggestions for code optimizations, documentation enhancements, or other non-critical areas for improvement.

PROJECT OVERVIEW | Sucre Finance.

Token Summary

Parameter	Result
Address	0xa05DD3Ae5a1407B45Ec119a1e290aafe4847e440
Name	Sucre Finance
Token Tracker	Sucre Finance (SUCRE)
Decimals	18
Supply	1,400,000,000
Platform	ETHEREUM
Compiler	v0.8.4+commit.c7e474f2
Contract Name	v0.8.4+commit.c7e474f2
Optimization	Yes with 200 runs
LicenseType	MIT
Language	Solidity
Codebase	https://etherscan.io/ address/0xa05DD3Ae5a1407B45Ec119a1e290aafe4847e440#codee

Main Contract Assessed

Name	Contract	Live
Sucre Finance	0xa05DD3Ae5a1407B45Ec119a1e290aafe4847e440	Yes

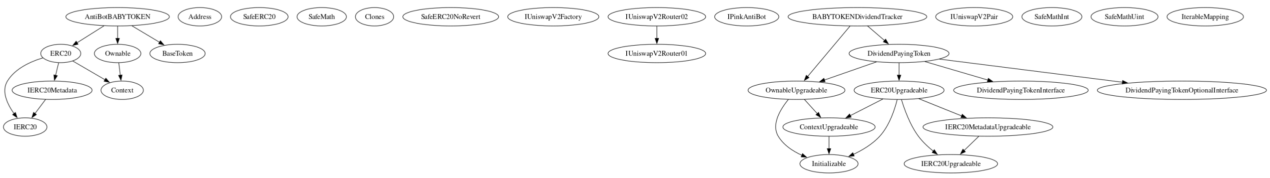
TestNet Contract Was Not Assessed

Solidity Code Provided

SolID	File Sha-1	FileName
AntiBotBABYTOKEN	fabc9b9cd35fd461bdd4fc624e44025278b7f2df	AntiBotBABYTOKEN.sol

Inheritance Check

Smart contract inheritance is a concept in blockchain programming where one smart contract can inherit properties and functionalities from another existing smart contract. This allows for code reuse and modularity, making the development process more efficient and scalable. Inheritance enables the child contract to access and utilize the variables, functions, and modifiers defined in the parent contract, thereby inheriting its behavior and characteristics. This feature is particularly useful in complex decentralized applications (dApps) where multiple contracts need to interact and share common functionalities. By leveraging smart contract inheritance, developers can create more organized and maintainable code structures, promoting code reusability and reducing redundancy.



TECHNICAL FINDINGS | Sucre Finance.

Smart contract security audits classify risks into several categories: Critical, High, Medium, Low, and Informational. These classifications help assess the severity and potential impact of vulnerabilities found in smart contracts.

Classification of Risk

Severity	Description
Critical	Critical risks are the most severe and can have a significant impact on the smart contracts functionality, security, or the entire system. These vulnerabilities can lead to the loss of user funds, unauthorized access, or complete system compromise.
High	High-risk vulnerabilities have the potential to cause significant harm to the smart contract or the system. While not as severe as critical risks, they can still result in financial losses, data breaches, or denial of service attacks.
Medium	Medium-risk vulnerabilities pose a moderate level of risk to the smart contracts security and functionality. They may not have an immediate and severe impact but can still lead to potential issues if exploited. These risks should be addressed to ensure the contracts overall security.
Low	Low-risk vulnerabilities have a minimal impact on the smart contracts security and functionality. They may not pose a significant threat, but it is still advisable to address them to maintain a robust security posture.
Informational	Informational risks are not actual vulnerabilities but provide useful information about potential improvements or best practices. These findings may include suggestions for code optimizations, documentation enhancements, or other non-critical areas for improvement.

By categorizing risks into these classifications, smart contract security audits can prioritize the resolution of critical and high-risk vulnerabilities to ensure the contract's overall security and protect user funds and data.

SUCRE-03 | Lack of Input Validation.

Category	Severity	Location	Status
Volatile Code	Low	AntiBotBABYTOKEN.sol: L: 80 C: 12, L: 84 C: 12, L: 274 C: 12	Detected

Description

The given input is missing the check for the non-zero address.

The given input is missing the check for the onlyOwners need to be revisited for require..

Recommendation

We advise the client to add the check for the passed-in values to prevent unexpected errors as below:

```
...
require(receiver != address(0), "Receiver is the zero address");
...
...
require(value X limitation, "Your not able to do this function");
...
```

We also recommend customer to review the following function that is missing a required validation. onlyOwners need to be revisited for require..

Mitigation

References:

Zero Address check. The danger!!!

SUCRE-05 | Missing Event Emission.

Category	Severity	Location	Status
Volatile Code	Low	AntiBotBABYTOKEN.sol: L: 80 C: 12, L: 84 C: 12, L: 132 C: 12, L: 257 C: 12, L: 274 C: 12	Detected

Description

Detected missing events for critical arithmetic parameters. There are functions that have no event emitted, so it is difficult to track off-chain changes.The linked code does not create an event for the transfer.

Recommendation

Emit an event for critical parameter changes. It is recommended emitting events for the sensitive functions that are controlled by centralization roles.

Mitigation

References:

Understanding Events in Smart Contracts

SUCRE-14 | Unnecessary Use Of SafeMath.

Category	Severity	Location	Status
Logical Issue	Medium	AntiBotBABYTOKEN.sol: L: 0 C: 0	Detected

Description

The SafeMath library is used unnecessarily. With Solidity compiler versions 0.8.0 or newer, arithmetic operations
will automatically revert in case of integer overflow or underflow.
library SafeMath {
An implementation of SafeMath library is found.
using SafeMath for uint256;
SafeMath library is used for uint256 type in contract.

Recommendation

We advise removing the usage of SafeMath library and using the built-in arithmetic operations provided by the
Solidity programming language.

Mitigation

References:

Writing Clean Code for Solidity: Best Practices for Solidity Development

SUCRE-19 | Centralization Privileges of SUCRE.

Category	Severity	Location	Status
Coding Style	Medium	AntiBotBABYTOKEN.sol: L: 393 C: 14,L: 385 C: 14,L: 341 C: 14,L: 306 C: 14,L: 299 C: 14,L: 269 C: 14	Detected

Description

In a smart contract, the concept of "onlyOwner" functions refers to certain functions that can only be executed by the owner or creator of the contract. These functions are typically designed to perform critical actions or modify sensitive data within the contract. By restricting access to these functions, the contract owner maintains control and ensures the integrity and security of the contract.

Function Name	Parameters	Visibility
renounceOwnership		Public
transferOwnership		Public
distributeCAKEDividends		Public
excludeFromDividends		External
updateClaimWait		External
updateMinimumTokenBalanceForDividends		External
setBalance		External
processAccount		Public
setEnableAntiBot		External
setSwapTokensAtAmount		External

Function Name	Parameters	Visibility
excludeFromFees		External
excludeMultipleAccountsFromFees		External
setMarketingWallet		External
setTokenRewardsFee		External
setLiquiditFee		External
setMarketingFee		External
updateGasForProcessing		Public
updateClaimWait		External
updateMinimumTokenBalanceForDividends		External
excludeFromDividends		External

Recommendation

Inheriting from Ownable and calling its constructor on yours ensures that the address deploying your contract is registered as the owner. The onlyOwner modifier makes a function revert if not called by the address registered as the owner. It is important that deployr or owner secure the credentials that has owner priviledge to ensure the security of the project.

Mitigation

References:

Guide to Ownership and Access Control in Solidity

Writing Clean Code for Solidity: Best Practices for Solidity Development

SUCRE-20 | Potential Reentrancy in lockTheSwap .

Category	Severity	Location	Status
Coding Style	Medium	AntiBotBABYTOKEN.sol:	Detected

Description

The function uses a call to lock the Swap which can be exploited for reentrancy..

Recommendation

Implement reentrancy guard or use checks-effects-interactions pattern..

Mitigation

References:

Writing Clean Code for Solidity: Best Practices for Solidity Development

FINDINGS

In this document, we present the findings and results of the smart contract security audit. The identified vulnerabilities, weaknesses, and potential risks are outlined, along with recommendations for mitigating these issues. It is crucial for the team to address these findings promptly to enhance the security and trustworthiness of the smart contract code.

Severity	Found	Pending	Resolved
Critical	0	0	0
High	0	0	0
Medium	2	3	0
Low	3	2	0
Informational	0	0	0
Total	5	5	0

In a smart contract, a technical finding summary refers to a compilation of identified issues or vulnerabilities discovered during a security audit. These findings can range from coding errors and logical flaws to potential security risks. It is crucial for the project owner to thoroughly review each identified item and take necessary actions to resolve them. By carefully examining the technical finding summary, the project owner can gain insights into the weaknesses or potential threats present in the smart contract. They should prioritize addressing these issues promptly to mitigate any risks associated with the contract's security. Neglecting to address any identified item in the security audit can expose the smart contract to significant risks. Unresolved vulnerabilities can be exploited by malicious actors, potentially leading to financial losses, data breaches, or other detrimental consequences. To ensure the integrity and security of the smart contract, the project owner should engage in a comprehensive review process. This involves understanding the nature and severity of each identified item, consulting with experts if needed, and implementing appropriate fixes or enhancements. Regularly updating and maintaining the smart contract's codebase is also essential to address any emerging security concerns. By diligently reviewing and resolving all identified items in the technical finding summary, the project owner can significantly reduce the risks associated with the smart contract and enhance its overall security posture.

SOCIAL MEDIA CHECKS | Sucre Finance.

Social Media	URL	Result
Website	https://www.sucre.finance	Pass
Telegram	@sucre_finance	Pass
Twitter	@sucrefinance	Pass
Facebook		N/A
Reddit		N/A
Instagram	N/A	Pass
CoinGecko	N/A	N/A
Github		N/A
CMC	N/A	N/A
Email		Contact
Other		N/A

From a security assessment standpoint, inspecting a project's social media presence is essential. It enables the evaluation of the project's reputation, credibility, and trustworthiness within the community. By analyzing the content shared, engagement levels, and the response to any security-related incidents, one can assess the project's commitment to security practices and its ability to handle potential threats.

Social Media Information Notes:

Auditor Notes:

Project Owner Notes:

ASSESSMENT RESULTS | Sucre Finance.

Score Rsesults

Review	Score
Overall Score	85/100
Auditor Score	85/100

Review by Section	Score
Manual Scan Score	26
SWC Scan Score	37
Advance Check Score	22

Our security assessment or audit score system for the smart contract and project follows a comprehensive evaluation process to ensure the highest level of security. The system assigns a score based on various security parameters and benchmarks, with a passing score set at 80 out of a total attainable score of 100.The assessment process includes a thorough review of the smart contracts codebase, architecture, and design principles. It examines potential vulnerabilities, such as code bugs, logical flaws, and potential attack vectors. The evaluation also considers the adherence to best practices and industry standards for secure coding. Additionally, the system assesses the projects overall security measures, including infrastructure security, data protection, and access controls. It evaluates the implementation of encryption, authentication mechanisms, and secure communication protocols. To achieve a passing score, the smart contract and project must attain a minimum of 80 points out of the total attainable score of 100. This ensures that the system has undergone a rigorous security assessment and meets the required standards for secure operation.

Important Notes for SUCRE

- Reentrancy: Ensure functions that involve external calls, like swapTokensForEth and swapTokensForCake, are protected against reentrancy attacks. Consider using the Checks-Effects-Interactions pattern or a reentrancy guard.
- Approval Race Condition: The approve function can lead to race conditions. Consider using increaseAllowance and decreaseAllowance functions instead.
- Access Control: Verify that only the owner can call functions like setMarketingWallet, setTokenRewardsFee, and excludeFromFees. Ensure that the onlyOwner modifier is applied to all sensitive functions.
- Anti-Bot Mechanism: Review the integration with PinkAntiBot to ensure it effectively prevents bot activity without hindering legitimate transactions.
- External Calls: Functions interacting with Uniswap (e.g., swapTokensForEth, addLiquidity) should handle potential failures and ensure that the contract state remains consistent.
- Arithmetic Operations: The code uses SafeMath, which

is good practice. Ensure all arithmetic operations are covered, especially in dividend calculations.

- Dividend Distribution: Check the logic in BABYTOKENDividendTracker to ensure dividends are calculated and distributed accurately. Ensure that excluded accounts are correctly handled in dividend calculations.

- Liquidity Management: Review the swapAndLiquify function for potential edge cases, such as low balances or insufficient liquidity. Ensure that liquidity is added securely and that slippage is managed appropriately.

- Gas Limitations: Monitor the process function in BABYTOKENDividendTracker to ensure it doesn't exceed block gas limits, especially with large numbers of token holders. Consider optimizing loops and using gas-efficient data structures.

- Contract Upgradability: If the contract is intended to be upgradeable, ensure that the upgrade mechanisms are secure and that state variables are properly initialized and managed.

- Event Emissions: Ensure that all state-changing functions emit appropriate events for transparency and off-chain tracking.

- Fallback Function: The contract should handle unexpected ETH transfers safely. Consider implementing a fallback function if necessary.
- Summary: Focus on reentrancy, access control, external interactions, and gas optimization.

Auditor Score =85
Audit Passed

Appendix

Finding Categories

Centralization / Privilege

Centralization / Privilege findings refer to either feature logic or implementation of components that actagainst the nature of decentralization, such as explicit ownership or specialized access roles incombination with a mechanism to relocate funds.

Gas Optimization

Gas Optimization findings do not affect the functionality of the code but generate different, more optimalEVM opcodes resulting in a reduction on the total gas cost of a transaction.

Logical Issue

Logical Issue findings detail a fault in the logic of the linked code, such as an incorrect notion on howblock.timestamp works.

Control Flow

Control Flow findings concern the access control imposed on functions, such as owner-only functionsbeing invoke-able by anyone under certain circumstances.

Volatile Code

Volatile Code findings refer to segments of code that behave unexpectedly on certain edge cases that mayresult in a vulnerability.

Coding Style

Coding Style findings usually do not affect the generated byte-code but rather comment on how to makethe codebase more legible and, as a result, easily maintainable.

Inconsistency

Inconsistency findings refer to functions that should seemingly behave similarly yet contain different code,such as a constructor assignment imposing different require statements on the input variables than a setterfunction.

Coding Best Practices

ERC 20 Conding Standards are a set of rules that each developer should follow to ensure the code meet a set of creterias and is readable by all the developers.

Disclaimer

The purpose of this disclaimer is to outline the responsibilities and limitations of the security assessment and smart contract audit conducted by Bladepool/CFG NINJA. By engaging our services, the project owner acknowledges and agrees to the following terms:

1. Limitation of Liability: Bladepool/CFG NINJA shall not be held liable for any damages, losses, or expenses incurred as a result of any contract malfunctions, vulnerabilities, or exploits discovered during the security assessment and smart contract audit. The project owner assumes full responsibility for any consequences arising from the use or implementation of the audited smart contract. 2. No Guarantee of Absolute Security: While Bladepool/CFG NINJA employs industry-standard practices and methodologies to identify potential security risks, it is important to note that no security assessment or smart contract audit can provide an absolute guarantee of security. The project owner acknowledges that there may still be unknown vulnerabilities or risks that are beyond the scope of our assessment. 3. Transfer of Responsibility: By engaging our services, the project owner agrees to assume full responsibility for addressing and mitigating any identified vulnerabilities or risks discovered during the security assessment and smart contract audit. It is the project owner s sole responsibility to ensure the proper implementation of necessary security measures and to address any identified issues promptly. 4. Compliance with Applicable Laws and Regulations: The project owner acknowledges and agrees to comply with all applicable laws, regulations, and industry standards related to the use and implementation of smart contracts. Bladepool/CFG NINJA shall not be held responsible for any non-compliance by the project owner. 5. Third-Party Services: The security assessment and smart contract audit conducted by Bladepool/CFG NINJA may involve the use of third-party tools, services, or technologies. While we exercise due diligence in selecting and utilizing these resources, we cannot be held liable for any issues or damages arising from the use of such third-party services. 6. Confidentiality: Bladepool/CFG NINJA maintains strict confidentiality regarding all information and data obtained during the security assessment and smart contract audit. However, we cannot guarantee the security of data transmitted over the internet or through any other means. 7. Not a Financial Advice: Bladepool/CFG NINJA please note that the information provided in the security assessment or audit should not be considered as financial advice. It is always recommended to consult with a financial professional or do thorough research before making any investment decisions.

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