



SugarYield Smart Contract Audit Report

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AUDITED DETAILS

Audited Project

Project name	Token ticker	Blockchain
SugarYield	SUGAR	Binance Smart Chain

Addresses

Contract address	0x57528b45134f09F2e0069334a36A7e14AF74745F
Contract deployer address	0xcadbe33ec806a88059FEa4a0F098EAd3afe05c4E

Project Website

<https://sugaryield.com/>

Codebase

<https://bscscan.com/address/0x57528b45134f09F2e0069334a36A7e14AF74745F#code>

SUMMARY

SugarYield.com is a DeFi insurance protocol that allows third-party participants to speculate on the performance of underlying pegged assets depending on their performance histories, including BUSD, DAI, USDT and many other stable tokens.

Contract Summary

Documentation Quality

SugarYield provides a very good documentation with standard of solidity base code.

- The technical description is provided clearly and structured and also don't have any high risk issue.

Code Quality

The Overall quality of the basecode is standard.

- Standard solidity basecode and rules are already followed by SugarYield with the discovery of several low issues.

Test Coverage

Test coverage of the project is 100% (Through Codebase)

Audit Findings Summary

- SWC-101 | It is recommended to use vetted safe math libraries for arithmetic operations consistently on lines 128, 138, 146, 165, 167, 179, 180, 194, 196, 506, 507, 507, 552, 552, 552, 553, 553, 604, 611, 611, 658, 685, 685, 689, 690, 690, 690, 714, 714, 716, 727, 728, 743, 771, 773, 776, 776, 781, 781, 789, 815, 815, 853, 853, 857 and 857.
- SWC-110 SWC-123 | It is recommended to use of `revert()`, `assert()`, and `require()` in Solidity, and the new REVERT opcode in the EVM on lines 733, 734, 761 and 762.

CONCLUSION

We have audited the SugarYield project released on January 2023 to discover issues and identify potential security vulnerabilities in SugarYield Project. This process is used to find technical issues and security loopholes which might be found in the smart contract.

The security audit report provides a satisfactory result with some low-risk issues.

The issues found in the SugarYield smart contract code do not pose a considerable risk. The writing of the contract is close to the standard of writing contracts in general. The low-risk issues found are some arithmetic operation issues, and out of bounds array access which the index access expression can cause an exception in case of the use of an invalid array index value.

AUDIT RESULT

Article	Category	Description	Result
Default Visibility	SWC-100 SWC-108	Functions and state variables visibility should be set explicitly. Visibility levels should be specified consciously.	PASS
Integer Overflow and Underflow	SWC-101	If unchecked math is used, all math operations should be safe from overflows and underflows.	ISSUE FOUND
Outdated Compiler Version	SWC-102	It is recommended to use a recent version of the Solidity compiler.	PASS
Floating Pragma	SWC-103	Contracts should be deployed with the same compiler version and flags that they have been tested thoroughly.	PASS
Unchecked Call Return Value	SWC-104	The return value of a message call should be checked.	PASS
Unprotected Ether Withdrawal	SWC-105	Due to missing or insufficient access controls, malicious parties can withdraw from the contract.	PASS
SELFDESTRUCT Instruction	SWC-106	The contract should not be self-destructible while it has funds belonging to users.	PASS
Reentrancy	SWC-107	Check effect interaction pattern should be followed if the code performs recursive call.	PASS
Uninitialized Storage Pointer	SWC-109	Uninitialized local storage variables can point to unexpected storage locations in the contract.	PASS
Assert Violation	SWC-110 SWC-123	Properly functioning code should never reach a failing assert statement.	ISSUE FOUND
Deprecated Solidity Functions	SWC-111	Deprecated built-in functions should never be used.	PASS
Delegate call to Untrusted Callee	SWC-112	Delegatecalls should only be allowed to trusted addresses.	PASS

DoS (Denial of Service)	SWC-113 SWC-128	Execution of the code should never be blocked by a specific contract state unless required.	PASS
Race Conditions	SWC-114	Race Conditions and Transactions Order Dependency should not be possible.	PASS
Authorization through tx.origin	SWC-115	tx.origin should not be used for authorization.	PASS
Block values as a proxy for time	SWC-116	Block numbers should not be used for time calculations.	PASS
Signature Unique ID	SWC-117 SWC-121 SWC-122	Signed messages should always have a unique id. A transaction hash should not be used as a unique id.	PASS
Incorrect Constructor Name	SWC-118	Constructors are special functions that are called only once during the contract creation.	PASS
Shadowing State Variable	SWC-119	State variables should not be shadowed.	PASS
Weak Sources of Randomness	SWC-120	Random values should never be generated from Chain Attributes or be predictable.	PASS
Write to Arbitrary Storage Location	SWC-124	The contract is responsible for ensuring that only authorized user or contract accounts may write to sensitive storage locations.	PASS
Incorrect Inheritance Order	SWC-125	When inheriting multiple contracts, especially if they have identical functions, a developer should carefully specify inheritance in the correct order. The rule of thumb is to inherit contracts from more /general/ to more /specific/.	PASS
Insufficient Gas Griefing	SWC-126	Insufficient gas grieving attacks can be performed on contracts which accept data and use it in a sub-call on another contract.	PASS
Arbitrary Jump Function	SWC-127	As Solidity doesnt support pointer arithmetics, it is impossible to change such variable to an arbitrary value.	PASS

Typographical Error	SWC-129	A typographical error can occur for example when the intent of a defined operation is to sum a number to a variable.	PASS
Override control character	SWC-130	Malicious actors can use the Right-To-Left-Override unicode character to force RTL text rendering and confuse users as to the real intent of a contract.	PASS
Unused variables	SWC-131 SWC-135	Unused variables are allowed in Solidity and they do not pose a direct security issue.	PASS
Unexpected Ether balance	SWC-132	Contracts can behave erroneously when they strictly assume a specific Ether balance.	PASS
Hash Collisions Variable	SWC-133	Using abi.encodePacked() with multiple variable length arguments can, in certain situations, lead to a hash collision.	PASS
Hardcoded gas amount	SWC-134	The transfer() and send() functions forward a fixed amount of 2300 gas.	PASS
Unencrypted Private Data	SWC-136	It is a common misconception that private type variables cannot be read.	PASS

SMART CONTRACT ANALYSIS

Started	Tuesday Jan 24 2023 06:54:38 GMT+0000 (Coordinated Universal Time)
Finished	Wednesday Jan 25 2023 10:04:05 GMT+0000 (Coordinated Universal Time)
Mode	Standard
Main Source File	SugarYield.sol

Detected Issues

ID	Title	Severity	Status
SWC-101	ARITHMETIC OPERATION "-" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "-" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "-" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+=" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+=" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+=" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+=" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "-" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "-=" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged

SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "-" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "-" DISCOVERED	low	acknowledged

SWC-101	ARITHMETIC OPERATION "-" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "-" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-110	OUT OF BOUNDS ARRAY ACCESS	low	acknowledged
SWC-110	OUT OF BOUNDS ARRAY ACCESS	low	acknowledged
SWC-110	OUT OF BOUNDS ARRAY ACCESS	low	acknowledged
SWC-110	OUT OF BOUNDS ARRAY ACCESS	low	acknowledged

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 128

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
127     unchecked {  
128         _approve(sender, _msgSender(), currentAllowance - amount);  
129     }  
130 }  
131  
132
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 138

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
137 function increaseAllowance(address spender, uint256 addedValue) public virtual
returns (bool) {
138     _approve(_msgSender(), spender, _allowances[_msgSender()][spender] + addedValue);
139     return true;
140 }
141
142
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 146

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
145     unchecked {  
146         _approve(_msgSender(), spender, currentAllowance - subtractedValue);  
147     }  
148  
149     return true;  
150
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 165

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
164     unchecked {  
165         _balances[sender] = senderBalance - amount;  
166     }  
167     _balances[recipient] += amount;  
168  
169
```

SWC-101 | ARITHMETIC OPERATION "+=" DISCOVERED

LINE 167

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
166     }  
167     _balances[recipient] += amount;  
168  
169     emit Transfer(sender, recipient, amount);  
170  
171
```

SWC-101 | ARITHMETIC OPERATION "+=" DISCOVERED

LINE 179

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
178
179  _totalSupply += amount;
180  _balances[account] += amount;
181  emit Transfer(address(0), account, amount);
182
183
```

SWC-101 | ARITHMETIC OPERATION "+=" DISCOVERED

LINE 180

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
179     _totalSupply += amount;  
180     _balances[account] += amount;  
181     emit Transfer(address(0), account, amount);  
182  
183     _afterTokenTransfer(address(0), account, amount);  
184
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 194

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
193     unchecked {  
194         _balances[account] = accountBalance - amount;  
195     }  
196     _totalSupply -= amount;  
197  
198
```

SWC-101 | ARITHMETIC OPERATION "-=" DISCOVERED

LINE 196

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
195     }  
196     _totalSupply -= amount;  
197  
198     emit Transfer(account, address(0), amount);  
199  
200
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 506

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```

505  {
506    require(_arg.buyFee_ + _arg.sellFee_ <= 25, "Total buy and sell fees cannot be more
than 25%");
507    require(_arg.marketingShare_ + _arg.liquidityShare_ + _arg.charityShare_ == 100,
"Total fee shares must be equal to 100");
508    require(_arg.maxTransactionRateBuy_ >= 1 && _arg.maxTransactionRateSell_ >= 1, "Max
transfer rates must be greater than 0.1%");
509    require(_arg.maxWalletLimitRate_ >= 10, "Max wallet limit rate must be greater than
1%");
510  }

```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 507

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
506     require(_arg.buyFee_ + _arg.sellFee_ <= 25, "Total buy and sell fees cannot be more
than 25%");
507     require(_arg.marketingShare_ + _arg.liquidityShare_ + _arg.charityShare_ == 100,
"Total fee shares must be equal to 100");
508     require(_arg.maxTransactionRateBuy_ >= 1 && _arg.maxTransactionRateSell_ >= 1, "Max
transfer rates must be greater than 0.1%");
509     require(_arg.maxWalletLimitRate_ >= 10, "Max wallet limit rate must be greater than
1%");
510
511
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 507

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
506     require(_arg.buyFee_ + _arg.sellFee_ <= 25, "Total buy and sell fees cannot be more
than 25%");
507     require(_arg.marketingShare_ + _arg.liquidityShare_ + _arg.charityShare_ == 100,
"Total fee shares must be equal to 100");
508     require(_arg.maxTransactionRateBuy_ >= 1 && _arg.maxTransactionRateSell_ >= 1, "Max
transfer rates must be greater than 0.1%");
509     require(_arg.maxWalletLimitRate_ >= 10, "Max wallet limit rate must be greater than
1%");
510
511
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 552

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
551
552  swapTokensAtAmount = _arg.totalSupply_ * (10 ** 18) / 5000;
553  _mint(owner(), _arg.totalSupply_ * (10 ** 18));
554
555  emit TokenCreated(owner(), address(this), TokenClass.basicToken, 3);
556
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 552

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
551
552  swapTokensAtAmount = _arg.totalSupply_ * (10 ** 18) / 5000;
553  _mint(owner(), _arg.totalSupply_ * (10 ** 18));
554
555  emit TokenCreated(owner(), address(this), TokenClass.basicToken, 3);
556
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 552

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
551
552  swapTokensAtAmount = _arg.totalSupply_ * (10 ** 18) / 5000;
553  _mint(owner(), _arg.totalSupply_ * (10 ** 18));
554
555  emit TokenCreated(owner(), address(this), TokenClass.basicToken, 3);
556
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 553

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
552  swapTokensAtAmount = _arg.totalSupply_ * (10 ** 18) / 5000;  
553  _mint(owner(), _arg.totalSupply_ * (10 ** 18));  
554  
555  emit TokenCreated(owner(), address(this), TokenClass.basicToken, 3);  
556  }  
557
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 553

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
552 swapTokensAtAmount = _arg.totalSupply_ * (10 ** 18) / 5000;  
553 _mint(owner(), _arg.totalSupply_ * (10 ** 18));  
554  
555 emit TokenCreated(owner(), address(this), TokenClass.basicToken, 3);  
556 }  
557
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 604

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
603     function updateFees(uint256 _buyFee, uint256 _sellFee) external onlyOwner {  
604         require(_buyFee + _sellFee <= 25, "Total buy and sell fees cannot be more than  
25%");  
605         buyFee = _buyFee;  
606         sellFee = _sellFee;  
607         emit FeesUpdated(buyFee, sellFee);  
608     }
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 611

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
610 function updateFeeShares(uint256 _marketingFeeShare, uint256 _liquidityFeeShare,
uint256 _charityShare) external onlyOwner {
611     require(_marketingFeeShare + _liquidityFeeShare + _charityShare == 100, "Total fee
shares must be equal to 100");
612     marketingShare = _marketingFeeShare;
613     liquidityShare = _liquidityFeeShare;
614     charityShare   = _charityShare;
615 }
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 611

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
610 function updateFeeShares(uint256 _marketingFeeShare, uint256 _liquidityFeeShare,
uint256 _charityShare) external onlyOwner {
611     require(_marketingFeeShare + _liquidityFeeShare + _charityShare == 100, "Total fee
shares must be equal to 100");
612     marketingShare = _marketingFeeShare;
613     liquidityShare = _liquidityFeeShare;
614     charityShare   = _charityShare;
615 }
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 658

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
657     uint balance  = balanceOf(to);
658     require(balance + amount <= maxWalletAmount(), "MaxWallet: Transfer amount exceeds
the maxWalletAmount");
659   }
660 }
661
662
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 685

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
684     if(liquidityShare > 0) {  
685         uint256 liquidityTokens = contractTokenBalance * liquidityShare / 100;  
686         swapAndLiquify(liquidityTokens);  
687     }  
688  
689
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 685

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
684     if(liquidityShare > 0) {  
685         uint256 liquidityTokens = contractTokenBalance * liquidityShare / 100;  
686         swapAndLiquify(liquidityTokens);  
687     }  
688  
689
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 689

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
688
689  if(marketingShare + charityShare > 0) {
690      uint256 feeTokens = (contractTokenBalance * (marketingShare + charityShare)) / 100;
691      swapAndSendFees(feeTokens);
692  }
693
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 690

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
689     if(marketingShare + charityShare > 0) {  
690         uint256 feeTokens = (contractTokenBalance * (marketingShare + charityShare)) / 100;  
691         swapAndSendFees(feeTokens);  
692     }  
693  
694
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 690

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
689     if(marketingShare + charityShare > 0) {  
690         uint256 feeTokens = (contractTokenBalance * (marketingShare + charityShare)) / 100;  
691         swapAndSendFees(feeTokens);  
692     }  
693  
694
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 690

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
689     if(marketingShare + charityShare > 0) {  
690         uint256 feeTokens = (contractTokenBalance * (marketingShare + charityShare)) / 100;  
691         swapAndSendFees(feeTokens);  
692     }  
693  
694
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 714

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
713     }  
714     uint256 fees = amount * _totalFees / 100;  
715  
716     amount = amount - fees;  
717  
718
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 714

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
713     }  
714     uint256 fees = amount * _totalFees / 100;  
715  
716     amount = amount - fees;  
717  
718
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 716

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
715
716  amount = amount - fees;
717
718  super._transfer(from, address(this), fees);
719  }
720
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 727

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
726 function swapAndLiquify(uint256 tokens) private {  
727     uint256 half = tokens / 2;  
728     uint256 otherHalf = tokens - half;  
729  
730     uint256 initialBalance = address(this).balance;  
731 }
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 728

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
727     uint256 half = tokens / 2;  
728     uint256 otherHalf = tokens - half;  
729  
730     uint256 initialBalance = address(this).balance;  
731  
732
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 743

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
742
743     uint256 newBalance = address(this).balance - initialBalance;
744
745     uniswapV2Router.addLiquidityETH{value: newBalance}(
746         address(this),
747
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 771

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
770
771  uint256 newBalance = address(this).balance - initialBalance;
772
773  uint256 bnbShare = marketingShare + charityShare;
774
775
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 773

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
772
773  uint256 bnbShare = marketingShare + charityShare;
774
775  if(marketingShare > 0) {
776    uint256 marketingBnb = newBalance * marketingShare / bnbShare;
777
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 776

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
775     if(marketingShare > 0) {  
776         uint256 marketingBnb = newBalance * marketingShare / bnbShare;  
777         sendBNB(payable(marketingWallet), marketingBnb);  
778     }  
779  
780
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 776

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
775     if(marketingShare > 0) {  
776         uint256 marketingBnb = newBalance * marketingShare / bnbShare;  
777         sendBNB(payable(marketingWallet), marketingBnb);  
778     }  
779  
780
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 781

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
780     if(charityShare > 0) {  
781         uint256 charityBnb = newBalance * charityShare / bnbShare;  
782         sendBNB(payable(charityWallet), charityBnb);  
783     }  
784  
785
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 781

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
780     if(charityShare > 0) {  
781         uint256 charityBnb = newBalance * charityShare / bnbShare;  
782         sendBNB(payable(charityWallet), charityBnb);  
783     }  
784  
785
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 789

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
788     function setSwapTokensAtAmount(uint256 newAmount) external onlyOwner{
789         require(newAmount > totalSupply() / 100000, "SwapTokensAtAmount must be greater
than 0.001% of total supply");
790         swapTokensAtAmount = newAmount;
791     }
792
793
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 815

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
814     function maxWalletAmount() public view returns (uint256) {  
815         return totalSupply() * maxWalletLimitRate / 1000;  
816     }  
817  
818     function setMaxWalletRate_Denominator1000(uint256 _val) external onlyOwner  
_maxWalletAvailable {  
819
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 815

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
814     function maxWalletAmount() public view returns (uint256) {  
815         return totalSupply() * maxWalletLimitRate / 1000;  
816     }  
817  
818     function setMaxWalletRate_Denominator1000(uint256 _val) external onlyOwner  
    _maxWalletAvailable {  
819
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 853

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
852     function maxTransferAmountBuy() public view returns (uint256) {  
853         return totalSupply() * maxTransactionRateBuy / 1000;  
854     }  
855  
856     function maxTransferAmountSell() public view returns (uint256) {  
857
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 853

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
852     function maxTransferAmountBuy() public view returns (uint256) {  
853         return totalSupply() * maxTransactionRateBuy / 1000;  
854     }  
855  
856     function maxTransferAmountSell() public view returns (uint256) {  
857
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 857

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
856     function maxTransferAmountSell() public view returns (uint256) {  
857         return totalSupply() * maxTransactionRateSell / 1000;  
858     }  
859  
860     function setMaxTransactionRates_Denominator1000(uint256 _maxTransactionRateBuy,  
uint256 _maxTransactionRateSell) external onlyOwner _maxTransactionAvailable {  
861
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 857

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- SugarYield.sol

Locations

```
856     function maxTransferAmountSell() public view returns (uint256) {  
857         return totalSupply() * maxTransactionRateSell / 1000;  
858     }  
859  
860     function setMaxTransactionRates_Denominator1000(uint256 _maxTransactionRateBuy,  
uint256 _maxTransactionRateSell) external onlyOwner _maxTransactionAvailable {  
861
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 733

low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- SugarYield.sol

Locations

```
732     address[] memory path = new address[](2);
733     path[0] = address(this);
734     path[1] = uniswapV2Router.WETH();
735
736     uniswapV2Router.swapExactTokensForETHSupportingFeeOnTransferTokens(
737
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 734

low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- SugarYield.sol

Locations

```
733     path[0] = address(this);  
734     path[1] = uniswapV2Router.WETH();  
735  
736     uniswapV2Router.swapExactTokensForETHSupportingFeeOnTransferTokens(  
737         half,  
738
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 761

low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- SugarYield.sol

Locations

```
760     address[] memory path = new address[](2);
761     path[0] = address(this);
762     path[1] = uniswapV2Router.WETH();
763
764     uniswapV2Router.swapExactTokensForETHSupportingFeeOnTransferTokens(
765
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 762

low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- SugarYield.sol

Locations

```
761  path[0] = address(this);  
762  path[1] = uniswapV2Router.WETH();  
763  
764  uniswapV2Router.swapExactTokensForETHSupportingFeeOnTransferTokens(  
765  tokenAmount,  
766
```

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